COURSE 05
NIOS BRIDGE COURSE • INDEPENDENT PRACTICE EDITION 2026–27

Pedagogy of Mathematics

गणित का शिक्षाशास्त्र

516 MCQs + 50 short-answer prompts

8 chapter groups • 16 new classroom-based MCQs • spacious single-column layout

Study • Practise • Reflect
Chapter-wise concept revision, practical classroom application and explained answers. This is supplementary preparation material, not an official NIOS publication or verified previous-year paper.

COURSE ROADMAP

Contents & chapter coverage

MCQ count includes original practice variants and new application questions.

01	Nature of Mathematics	72 MCQs
02	How Children Learn Mathematics	92 MCQs
03	Mathematical Communication	62 MCQs
04	Teaching Learning in Mathematics	102 MCQs
05	Resources in Mathematics Learning	52 MCQs
06	Planning in Mathematics	42 MCQs
07	Assessment in Mathematics	72 MCQs
08	Curriculum	22 MCQs

Coverage and source note. This revised edition retains the chapter catalogue and 300 core concepts from the earlier question bank and its companion website. It adds independent pedagogical practice questions. Official reference: bridge.nios.ac.in and its course details. Individual NIOS chapter PDFs were not available for full inspection in the earlier research; this is not an exhaustive or independently verified PDF-by-PDF mapping. Language-I is predominantly Hindi; other courses are predominantly English with Hindi concept labels. Language-II reading assessment and curricular alignment are supplementary chapter groupings retained from the earlier edition.

CHAPTER 01 • 72 MCQs • 7 REVISION PROMPTS

Nature of Mathematics

Important topics, examples, new classroom scenarios and core practice

Important topics & revision notes

Abstraction / अमूर्तीकरण

Representing common mathematical properties apart from particular objects.

Classroom example: Children represent three apples and three stones with the same number 3.

Deductive reasoning / निगमनात्मक तर्क

Drawing a conclusion that follows from accepted premises or rules.

Classroom example: Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

Mathematization / गणितीकरण

Expressing or analysing real situations using mathematical ideas.

Classroom example: Children represent a sharing situation using division.

Mathematical language / गणितीय भाषा

Using precise terms and symbols to communicate mathematical meaning.

Classroom example: A pupil writes 7 > 5 to express a comparison.

Inductive reasoning / आगमनात्मक तर्क

Forming a tentative generalisation from observed cases.

Classroom example: Pupils notice that adding two even numbers gives even results and test more cases.

Mathematical pattern / गणितीय पैटर्न

A regularity described by a relationship or rule.

Classroom example: Children extend a repeating red-blue-blue sequence.

Problem posing / समस्या निर्माण

Creating meaningful mathematical questions from a situation.

Classroom example: Pupils invent questions about quantities shown in a market picture.

New classroom-based questions

Apply concepts to realistic teaching decisions.

MCQ 001 • NEW CLASSROOM APPLICATION

A pupil finds that several consecutive odd-number sums form squares. What should the teacher encourage?

A. Accept the pattern without investigation

B. Avoid generalisation

C. Memorise the observed numbers only

D. Explain the pattern with diagrams and reasoning

Correct answer / सही उत्तर: D. Explain the pattern with diagrams and reasoning

Explanation / व्याख्या

Mathematics involves identifying patterns and justifying claims.

GyanTech Guru Ji

MCQ 002 • NEW CLASSROOM APPLICATION

How can the claim that all rectangles are squares be disproved?

A. Show a rectangle with unequal adjacent sides
B. Repeat the claim louder
C. Count the number of letters in rectangle
D. Show another square

Correct answer / सही उत्तर: A. Show a rectangle with unequal adjacent sides

Explanation / व्याख्या

One counterexample disproves a universal statement.

Core question bank

Ten related practice formats; core concepts recur for revision.

MCQ 003 • CORE PRACTICE · FORM 01

Identify the concept described: Representing common mathematical properties apart from particular objects.

A. Multiple strategies / अनेक रणनीतियाँ
B. Error analysis / त्रुटि विश्लेषण
C. Unit planning / इकाई योजना
D. Abstraction / अमूर्तीकरण

Correct answer / सही उत्तर: D. Abstraction / अमूर्तीकरण

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3.

GyanTech Guru Ji

MCQ 004 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children represent three apples and three stones with the same number 3.

A. Curriculum progression / पाठ्यचर्या प्रगति

B. Abstraction / अमूर्तीकरण

C. Formative assessment / निर्माणात्मक आकलन

D. Data handling / आँकड़ा प्रबंधन

Correct answer / सही उत्तर: B. Abstraction / अमूर्तीकरण

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3.

MCQ 005 • CORE PRACTICE · FORM 03

Which explanation best defines Abstraction / अमूर्तीकरण?

A. Evaluating mathematics achievement after an instructional period.

B. Partitioning a quantity into groups of equal size.

C. Representing common mathematical properties apart from particular objects.

D. Matching exactly one element of one collection to each element of another.

Correct answer / सही उत्तर: C. Representing common mathematical properties apart from particular objects.

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3.

MCQ 006 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Abstraction / अमूर्तीकरण?

A. A pupil exchanges ten unit cubes for a ten rod.

B. A child recognises that spreading five counters does not create more counters.

C. A lesson moves from equal groups to drawings and multiplication notation.

D. Children represent three apples and three stones with the same number 3.

Correct answer / सही उत्तर: D. Children represent three apples and three stones with the same number 3.

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3.

MCQ 007 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Representing common mathematical properties apart from particular objects. (2) Materials representing units, tens and other base-ten groupings.

A. Abstraction / अमूर्तीकरण | Formative assessment / निर्माणात्मक आकलन

B. Place-value blocks / स्थानीय मान ब्लॉक | Abstraction / अमूर्तीकरण

C. Cardinality / गणन संख्या बोध | Place-value blocks / स्थानीय मान ब्लॉक

D. Abstraction / अमूर्तीकरण | Place-value blocks / स्थानीय मान ब्लॉक

Correct answer / सही उत्तर: D. Abstraction / अमूर्तीकरण | Place-value blocks / स्थानीय मान ब्लॉक

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3. Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

GyanTech Guru Ji

MCQ 008 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children represent three apples and three stones with the same number 3. (2) A teacher asks why a child wrote 305 for thirty-five before planning support.

A. Error analysis / त्रुटि विश्लेषण | Abstraction / अमूर्तीकरण

B. Abstraction / अमूर्तीकरण | Data handling / आँकड़ा प्रबंधन

C. Abstraction / अमूर्तीकरण | Error analysis / त्रुटि विश्लेषण

D. Local resources / स्थानीय संसाधन | Error analysis / त्रुटि विश्लेषण

Correct answer / सही उत्तर: C. Abstraction / अमूर्तीकरण | Error analysis / त्रुटि विश्लेषण

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3. Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning. Application: A teacher asks why a child wrote 305 for thirty-five before planning support.

GyanTech Guru Ji

MCQ 009 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Abstraction / अमूर्तीकरण and Estimation / अनुमान.

A. Finding a reasonable approximate quantity or result. | Representing common mathematical properties apart from particular objects.

B. Arranging items in order by a measurable property. | Finding a reasonable approximate quantity or result.

C. Representing common mathematical properties apart from particular objects. | A structured resource whose activities can support mathematical understanding.

D. Representing common mathematical properties apart from particular objects. | Finding a reasonable approximate quantity or result.

Correct answer / सही उत्तर: D. Representing common mathematical properties apart from particular objects. | Finding a reasonable approximate quantity or result.

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3. Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 010 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Abstraction / अमूर्तीकरण and Performance task / प्रदर्शन कार्य.

A. Pupils measure and compare real classroom objects. | Children represent three apples and three stones with the same number 3.

B. Children arrange sticks from shortest to longest. | Pupils measure and compare real classroom objects.

C. Children represent three apples and three stones with the same number 3. | Pupils measure and compare real classroom objects.

D. Children represent three apples and three stones with the same number 3. | A pupil predicts which shape fits after a rotation.

Correct answer / सही उत्तर: C. Children represent three apples and three stones with the same number 3. | Pupils measure and compare real classroom objects.

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3. Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 011 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Abstraction / अमूर्तीकरण / Number line / संख्या रेखा)

A. Number sense / संख्या बोध → Using ongoing evidence to guide further mathematics learning.

B. Number line / संख्या रेखा → Flexible understanding of numbers, magnitudes and relationships.

C. Abstraction / अमूर्तीकरण → A linear representation of ordered numerical positions.

D. Abstraction / अमूर्तीकरण → Representing common mathematical properties apart from particular objects.

Correct answer / सही उत्तर: D. Abstraction / अमूर्तीकरण → Representing common mathematical properties apart from particular objects.

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3.

MCQ 012 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Abstraction / अमूर्तीकरण / Geometric reasoning / ज्यामितीय तर्क)

A. Abstraction / अमूर्तीकरण → Pupils sort quadrilaterals according to their sides and angles.

B. Geometric reasoning / ज्यामितीय तर्क→ Children arrange sticks from shortest to longest.

C. Abstraction / अमूर्तीकरण → Children represent three apples and three stones with the same number 3.

D. Seriation / क्रमबद्धता → A pupil draws equal groups to explain a multiplication expression.

Correct answer / सही उत्तर: C. Abstraction / अमूर्तीकरण → Children represent three apples and three stones with the same number 3.

Explanation / व्याख्या

Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3.

MCQ 013 • CORE PRACTICE · FORM 01

Identify the concept described: Drawing a conclusion that follows from accepted premises or rules.

A. Formative assessment / निर्माणात्मक आकलन

B. Deductive reasoning / निगमनात्मक तर्क

C. Data handling / आँकड़ा प्रबंधन

D. Mathematical competency / गणितीय दक्षता

Correct answer / सही उत्तर: B. Deductive reasoning / निगमनात्मक तर्क

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

MCQ 014 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

A. Deductive reasoning / निगमनात्मक तर्क

B. Performance task / प्रदर्शन कार्य

C. Number sense / संख्या बोध

D. Multiple strategies / अनेक रणनीतियाँ

Correct answer / सही उत्तर: A. Deductive reasoning / निगमनात्मक तर्क

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

MCQ 015 • CORE PRACTICE · FORM 03

Which explanation best defines Deductive reasoning / निगमनात्मक तर्क?

A. Evaluating mathematics achievement after an instructional period.

B. Drawing a conclusion that follows from accepted premises or rules.

C. A structured resource whose activities can support mathematical understanding.

D. An observable statement of expected mathematical learning.

Correct answer / सही उत्तर: B. Drawing a conclusion that follows from accepted premises or rules.

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

MCQ 016 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Deductive reasoning / निगमनात्मक तर्क?

A. Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

B. A pupil can compare two lengths using the same unit.

C. A pupil records an equal-groups situation as 4 × 3 = 12.

D. Pupils measure and compare real classroom objects.

Correct answer / सही उत्तर: A. Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

MCQ 017 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Drawing a conclusion that follows from accepted premises or rules. (2) Arranging items in order by a measurable property.

A. Deductive reasoning / निगमनात्मक तर्क| Seriation / क्रमबद्धता

B. Seriation / क्रमबद्धता | Deductive reasoning / निगमनात्मक तर्क

C. Deductive reasoning / निगमनात्मक तर्क| Mathematical representation / गणितीय निरूपण

D. Mathematics laboratory / गणित प्रयोगशाला | Seriation / क्रमबद्धता

Correct answer / सही उत्तर: A. Deductive reasoning / निगमनात्मक तर्क| Seriation / क्रमबद्धता

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides. Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest.

MCQ 018 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Using the fact that all squares have four sides, a pupil concludes a given square has four sides. (2) A pupil explains why 49 plus 21 is close to 70 before calculating.

A. Deductive reasoning / निगमनात्मक तर्क| Number sense / संख्या बोध

B. Number sense / संख्या बोध | Deductive reasoning / निगमनात्मक तर्क

C. Deductive reasoning / निगमनात्मक तर्क| Manipulatives / मूर्त शिक्षण सामग्री

D. Equal sharing / समान बाँट | Number sense / संख्या बोध

Correct answer / सही उत्तर: A. Deductive reasoning / निगमनात्मक तर्क| Number sense / संख्या बोध

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides. Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships. Application: A pupil explains why 49 plus 21 is close to 70 before calculating.

GyanTech

MCQ 019 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Deductive reasoning / निगमनात्मक तर्क and Learning outcome / अधिगम प्रतिफल.

A. Drawing a conclusion that follows from accepted premises or rules. | An observable statement of expected mathematical learning.

B. An observable statement of expected mathematical learning. | Drawing a conclusion that follows from accepted premises or rules.

C. Materials available in the community used for mathematical exploration. | An observable statement of expected mathematical learning.

D. Drawing a conclusion that follows from accepted premises or rules. | Examining learner mistakes to infer their underlying reasoning.

Correct answer / सही उत्तर: A. Drawing a conclusion that follows from accepted premises or rules. | An observable statement of expected mathematical learning.

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides. Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning. Application: A pupil can compare two lengths using the same unit.

MCQ 020 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Deductive reasoning / निगमनात्मक तर्क and Qualitative feedback / गुणात्मक प्रतिक्रिया.

A. The teacher explains how to improve the alignment of tens and ones. | Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

B. Using the fact that all squares have four sides, a pupil concludes a given square has four sides. | A teacher asks why a child wrote 305 for thirty-five before planning support.

C. Using the fact that all squares have four sides, a pupil concludes a given square has four sides. | The teacher explains how to improve the alignment of tens and ones.

D. A pupil can compare two lengths using the same unit. | The teacher explains how to improve the alignment of tens and ones.

Correct answer / सही उत्तर: C. Using the fact that all squares have four sides, a pupil concludes a given square has four sides. | The teacher explains how to improve the alignment of tens and ones.

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides. Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

MCQ 021 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Deductive reasoning / निगमनात्मक तर्क/ Seriation / क्रमबद्धता)

A. Deductive reasoning / निगमनात्मक तर्क→ Drawing a conclusion that follows from accepted premises or rules.

B. Deductive reasoning / निगमनात्मक तर्क→ Arranging items in order by a measurable property.

C. Curriculum progression / पाठ्यचर्या प्रगति → Showing mathematical relationships with drawings or diagrams.

D. Seriation / क्रमबद्धता → Organising mathematical ideas in a coherent developmental sequence.

Correct answer / सही उत्तर: A. Deductive reasoning / निगमनात्मक तर्क→ Drawing a conclusion that follows from accepted premises or rules.

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

MCQ 022 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Deductive reasoning / निगमनात्मक तर्क/ Qualitative feedback / गुणात्मक प्रतिक्रिया)

A. Deductive reasoning / निगमनात्मक तर्क→ The teacher explains how to improve the alignment of tens and ones.

B. Deductive reasoning / निगमनात्मक तर्क→ Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

C. Qualitative feedback / गुणात्मक प्रतिक्रिया → Children measure a desk using equal paper strips.

D. Non-standard measurement / अमानक मापन → A teacher asks why a child wrote 305 for thirty-five before planning support.

Correct answer / सही उत्तर: B. Deductive reasoning / निगमनात्मक तर्क→ Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

Explanation / व्याख्या

Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

MCQ 023 • CORE PRACTICE · FORM 01

Identify the concept described: Expressing or analysing real situations using mathematical ideas.

A. Pictograph / चित्रालेख

B. Task sequencing / कार्य क्रम

C. Mathematization / गणितीकरण

D. Equal sharing / समान बाँट

Correct answer / सही उत्तर: C. Mathematization / गणितीकरण

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas.
Application: Children represent a sharing situation using division.

MCQ 024 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children represent a sharing situation using division.

A. Error analysis / त्रुटि विश्लेषण

B. Mathematical argument / गणितीय तर्क प्रस्तुति

C. Mathematization / गणितीकरण

D. Estimation / अनुमान

Correct answer / सही उत्तर: C. Mathematization / गणितीकरण

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas.
Application: Children represent a sharing situation using division.

GyanTech Guru Ji

MCQ 025 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematization / गणितीकरण?

A. Showing mathematical relationships with actual objects.

B. Using an ordered sequence of number names consistently when counting.

C. Expressing or analysing real situations using mathematical ideas.

D. Materials available in the community used for mathematical exploration.

Correct answer / सही उत्तर: C. Expressing or analysing real situations using mathematical ideas.

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas.
Application: Children represent a sharing situation using division.

MCQ 026 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematization / गणितीकरण?

A. A child immediately identifies three dots on a card.

B. A pupil explains why 49 plus 21 is close to 70 before calculating.

C. The teacher explains how to improve the alignment of tens and ones.

D. Children represent a sharing situation using division.

Correct answer / सही उत्तर: D. Children represent a sharing situation using division.

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas.
Application: Children represent a sharing situation using division.

MCQ 027 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Expressing or analysing real situations using mathematical ideas. (2) Investigating particular errors or gaps in mathematical understanding.

A. Diagnostic assessment / निदानात्मक आकलन | Mathematization / गणितीकरण

B. Mathematization / गणितीकरण | Diagnostic assessment / निदानात्मक आकलन

C. Mathematization / गणितीकरण | Cardinality / गणन संख्या बोध

D. Mathematical discussion / गणितीय चर्चा | Diagnostic assessment / निदानात्मक आकलन

Correct answer / सही उत्तर: B. Mathematization / गणितीकरण | Diagnostic assessment / निदानात्मक आकलन

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas. Application: Children represent a sharing situation using division. Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

GyanTech

MCQ 028 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children represent a sharing situation using division. (2) The teacher explains how to improve the alignment of tens and ones.

A. Mathematization / गणितीकरण | Qualitative feedback / गुणात्मक प्रतिक्रिया

B. Mathematization / गणितीकरण | Estimation / अनुमान

C. Qualitative feedback / गुणात्मक प्रतिक्रिया | Mathematization / गणितीकरण

D. Task sequencing / कार्य क्रम | Qualitative feedback / गुणात्मक प्रतिक्रिया

Correct answer / सही उत्तर: A. Mathematization / गणितीकरण | Qualitative feedback / गुणात्मक प्रतिक्रिया

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas. Application: Children represent a sharing situation using division. Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

GyanTech

MCQ 029 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematization / गणितीकरण and Data handling / आँकड़ा प्रबंधन.

A. Expressing or analysing real situations using mathematical ideas. | Materials available in the community used for mathematical exploration.

B. Collecting, organising and interpreting information. | Expressing or analysing real situations using mathematical ideas.

C. Organising mathematical ideas in a coherent developmental sequence. | Collecting, organising and interpreting information.

D. Expressing or analysing real situations using mathematical ideas. | Collecting, organising and interpreting information.

Correct answer / सही उत्तर: D. Expressing or analysing real situations using mathematical ideas. | Collecting, organising and interpreting information.

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas. Application: Children represent a sharing situation using division. Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

MCQ 030 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematization / गणितीकरण and Open-ended task / मुक्त उत्तर कार्य.

A. Children represent a sharing situation using division. | A child immediately identifies three dots on a card.

B. Counting and grouping experiences precede formal multiplication notation. | Children find different pairs of whole numbers whose sum is ten.

C. Children represent a sharing situation using division. | Children find different pairs of whole numbers whose sum is ten.

D. Children find different pairs of whole numbers whose sum is ten. | Children represent a sharing situation using division.

Correct answer / सही उत्तर: C. Children represent a sharing situation using division. | Children find different pairs of whole numbers whose sum is ten.

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas. Application: Children represent a sharing situation using division. Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches. Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 031 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematization / गणितीकरण / Performance task / प्रदर्शन कार्य)

A. Place value / स्थानीय मान → Collecting, organising and interpreting information.

B. Mathematization / गणितीकरण → A task requiring demonstration of mathematical knowledge in action.

C. Performance task / प्रदर्शन कार्य → The value a digit has because of its position in a numeral.

D. Mathematization / गणितीकरण → Expressing or analysing real situations using mathematical ideas.

Correct answer / सही उत्तर: D. Mathematization / गणितीकरण → Expressing or analysing real situations using mathematical ideas.

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas. Application: Children represent a sharing situation using division.

MCQ 032 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematization / गणितीकरण / Concrete representation / मूर्त निरूपण)

A. Concrete representation / मूर्त निरूपण → A child explains why two differently arranged shapes have equal area.

B. Mathematization / गणितीकरण → A pupil uses counters to demonstrate addition.

C. Mathematization / गणितीकरण → Children represent a sharing situation using division.

D. Mathematical argument / गणितीय तर्क प्रस्तुति → A pupil draws equal groups to explain a multiplication expression.

Correct answer / सही उत्तर: C. Mathematization / गणितीकरण → Children represent a sharing situation using division.

Explanation / व्याख्या

Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas. Application: Children represent a sharing situation using division.

MCQ 033 • CORE PRACTICE · FORM 01

Identify the concept described: Using precise terms and symbols to communicate mathematical meaning.

A. Formative assessment / निर्माणात्मक आकलन

B. One-to-one correspondence / एक-एक संगति

C. Mathematical language / गणितीय भाषा

D. Multiple strategies / अनेक रणनीतियाँ

Correct answer / सही उत्तर: C. Mathematical language / गणितीय भाषा

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

MCQ 034 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil writes 7 > 5 to express a comparison.

A. Mathematical language / गणितीय भाषा

B. Concrete representation / मूर्त निरूपण

C. Task sequencing / कार्य क्रम

D. Subitizing / त्वरित संख्या पहचान

Correct answer / सही उत्तर: A. Mathematical language / गणितीय भाषा

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

MCQ 035 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematical language / गणितीय भाषा?

A. A structured resource whose activities can support mathematical understanding.

B. Allowing different valid methods for solving a problem.

C. Using precise terms and symbols to communicate mathematical meaning.

D. Using ongoing evidence to guide further mathematics learning.

Correct answer / सही उत्तर: C. Using precise terms and symbols to communicate mathematical meaning.

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

MCQ 036 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematical language / गणितीय भाषा?

A. Pupils plan how to distribute materials fairly and explain the solution.

B. A pupil computes 19 plus 26 as 20 plus 25.

C. The teacher explains how to improve the alignment of tens and ones.

D. A pupil writes 7 > 5 to express a comparison.

Correct answer / सही उत्तर: D. A pupil writes 7 > 5 to express a comparison.

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

MCQ 037 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Using precise terms and symbols to communicate mathematical meaning. (2) Using flexible number relationships without written standard algorithms.

A. Mental mathematics / मानसिक गणना | Mathematical language / गणितीय भाषा

B. Mathematical language / गणितीय भाषा | Mental mathematics / मानसिक गणना

C. Conservation of number / संख्या संरक्षण | Mental mathematics / मानसिक गणना

D. Mathematical language / गणितीय भाषा | Learning outcome / अधिगम प्रतिफल

Correct answer / सही उत्तर: B. Mathematical language / गणितीय भाषा | Mental mathematics / मानसिक गणना

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison. Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

GyanTech Guru Ji

MCQ 038 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil writes 7 > 5 to express a comparison. (2) The teacher explains how to improve the alignment of tens and ones.

A. Mathematical language / गणितीय भाषा | Equal sharing / समान बाँट

B. Mathematical language / गणितीय भाषा | Qualitative feedback / गुणात्मक प्रतिक्रिया

C. Place-value blocks / स्थानीय मान ब्लॉक | Qualitative feedback / गुणात्मक प्रतिक्रिया

D. Qualitative feedback / गुणात्मक प्रतिक्रिया | Mathematical language / गणितीय भाषा

Correct answer / सही उत्तर: B. Mathematical language / गणितीय भाषा | Qualitative feedback / गुणात्मक प्रतिक्रिया

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison. Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

GyanTech Guru Ji

MCQ 039 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematical language / गणितीय भाषा and Pictograph / चित्रालेख.

A. Using precise terms and symbols to communicate mathematical meaning. | Representing data with pictures or symbols and a key when needed.

B. Representing data with pictures or symbols and a key when needed. | Using precise terms and symbols to communicate mathematical meaning.

C. Using precise terms and symbols to communicate mathematical meaning. | Using ongoing evidence to guide further mathematics learning.

D. Recognising a small quantity without counting each item individually. | Representing data with pictures or symbols and a key when needed.

Correct answer / सही उत्तर: A. Using precise terms and symbols to communicate mathematical meaning. | Representing data with pictures or symbols and a key when needed.

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison. Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes.

MCQ 040 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematical language / गणितीय भाषा and Unit planning / इकाई योजना.

A. A pupil writes 7 > 5 to express a comparison. | A teacher plans several connected lessons on measurement.

B. A pupil writes 7 > 5 to express a comparison. | A pupil draws groups of circles to represent multiplication.

C. A child estimates the number of pencils in a jar before counting. | A teacher plans several connected lessons on measurement.

D. A teacher plans several connected lessons on measurement. | A pupil writes 7 > 5 to express a comparison.

Correct answer / सही उत्तर: A. A pupil writes 7 > 5 to express a comparison. | A teacher plans several connected lessons on measurement.

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison. Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time. Application: A teacher plans several connected lessons on measurement.

MCQ 041 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematical language / गणितीय भाषा / Unit planning / इकाई योजना)

A. Place-value blocks / स्थानीय मान ब्लॉक → Arranging items in order by a measurable property.

B. Mathematical language / गणितीय भाषा → Sequencing related lessons to develop mathematical goals over time.

C. Unit planning / इकाई योजना → Materials representing units, tens and other base-ten groupings.

D. Mathematical language / गणितीय भाषा → Using precise terms and symbols to communicate mathematical meaning.

Correct answer / सही उत्तर: D. Mathematical language / गणितीय भाषा → Using precise terms and symbols to communicate mathematical meaning.

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

MCQ 042 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematical language / गणितीय भाषा / Data handling / आँकड़ा प्रबंधन)

A. Mathematical language / गणितीय भाषा → Children tally classmates' favourite fruits and compare frequencies.

B. Mathematical language / गणितीय भाषा → A pupil writes 7 > 5 to express a comparison.

C. Mathematical rubric / गणितीय मानदंड तालिका → A teacher adapts a book exercise into a hands-on activity.

D. Data handling / आँकड़ा प्रबंधन → A teacher assesses explanation, strategy and accuracy separately.

Correct answer / सही उत्तर: B. Mathematical language / गणितीय भाषा → A pupil writes 7 > 5 to express a comparison.

Explanation / व्याख्या

Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

MCQ 043 • CORE PRACTICE · FORM 01

Identify the concept described: Forming a tentative generalisation from observed cases.

A. Inductive reasoning / आगमनात्मक तर्क

B. Cardinality / गणन संख्या बोध

C. Mathematical argument / गणितीय तर्क प्रस्तुति

D. Qualitative feedback / गुणात्मक प्रतिक्रिया

Correct answer / सही उत्तर: A. Inductive reasoning / आगमनात्मक तर्क

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 044 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Pupils notice that adding two even numbers gives even results and test more cases.

A. Diagnostic assessment / निदानात्मक आकलन

B. Mathematical competency / गणितीय दक्षता

C. Inductive reasoning / आगमनात्मक तर्क

D. Place value / स्थानीय मान

Correct answer / सही उत्तर: C. Inductive reasoning / आगमनात्मक तर्क

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases.
Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 045 • CORE PRACTICE · FORM 03

Which explanation best defines Inductive reasoning / आगमनात्मक तर्क?

A. Forming a tentative generalisation from observed cases.

B. Finding a reasonable approximate quantity or result.

C. Materials representing units, tens and other base-ten groupings.

D. Examining learner mistakes to infer their underlying reasoning.

Correct answer / सही उत्तर: A. Forming a tentative generalisation from observed cases.

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases.
Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 046 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Inductive reasoning / आगमनात्मक तर्क?

A. A pupil records an equal-groups situation as 4 × 3 = 12.

B. Pupils notice that adding two even numbers gives even results and test more cases.

C. Counting and grouping experiences precede formal multiplication notation.

D. A child estimates the number of pencils in a jar before counting.

Correct answer / सही उत्तर: B. Pupils notice that adding two even numbers gives even results and test more cases.

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases.
Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 047 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Forming a tentative generalisation from observed cases. (2) A task allowing multiple valid solutions or approaches.

A. Open-ended task / मुक्त उत्तर कार्य | Inductive reasoning / आगमनात्मक तर्क

B. Inductive reasoning / आगमनात्मक तर्क| Open-ended task / मुक्त उत्तर कार्य

C. Pictograph / चित्रालेख | Open-ended task / मुक्त उत्तर कार्य

D. Inductive reasoning / आगमनात्मक तर्क| Mathematical representation / गणितीय निरूपण

Correct answer / सही उत्तर: B. Inductive reasoning / आगमनात्मक तर्क| Open-ended task / मुक्त उत्तर कार्य

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases.
Application: Pupils notice that adding two even numbers gives even results and test more cases.
Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches.
Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 048 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Pupils notice that adding two even numbers gives even results and test more cases. (2) A teacher assesses explanation, strategy and accuracy separately.

A. Inductive reasoning / आगमनात्मक तर्क| Mathematical rubric / गणितीय मानदंड तालिका

B. Mathematical discussion / गणितीय चर्चा | Mathematical rubric / गणितीय मानदंड तालिका

C. Mathematical rubric / गणितीय मानदंड तालिका | Inductive reasoning / आगमनात्मक तर्क

D. Inductive reasoning / आगमनात्मक तर्क| Number line / संख्या रेखा

Correct answer / सही उत्तर: A. Inductive reasoning / आगमनात्मक तर्क| Mathematical rubric / गणितीय मानदंड तालिका

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases. Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

MCQ 049 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Inductive reasoning / आगमनात्मक तर्क and Data handling / आँकड़ा प्रबंधन.

A. Forming a tentative generalisation from observed cases. | Measuring using informal repeatable units.

B. Using ongoing evidence to guide further mathematics learning. | Collecting, organising and interpreting information.

C. Collecting, organising and interpreting information. | Forming a tentative generalisation from observed cases.

D. Forming a tentative generalisation from observed cases. | Collecting, organising and interpreting information.

Correct answer / सही उत्तर: D. Forming a tentative generalisation from observed cases. | Collecting, organising and interpreting information.

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases. Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

MCQ 050 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Inductive reasoning / आगमनात्मक तर्क and Mathematics textbook / गणित पाठ्यपुस्तक.

A. Pupils notice that adding two even numbers gives even results and test more cases. | A teacher adapts a book exercise into a hands-on activity.

B. A teacher adapts a book exercise into a hands-on activity. | Pupils notice that adding two even numbers gives even results and test more cases.

C. After counting five shells, a child answers how many without counting again. | A teacher adapts a book exercise into a hands-on activity.

D. Pupils notice that adding two even numbers gives even results and test more cases. | A teacher plans several connected lessons on measurement.

Correct answer / सही उत्तर: A. Pupils notice that adding two even numbers gives even results and test more cases. | A teacher adapts a book exercise into a hands-on activity.

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क: Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases. Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 051 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Inductive reasoning / आगमनात्मक तर्क/ Estimation / अनुमान)

A. Inductive reasoning / आगमनात्मक तर्क→ Finding a reasonable approximate quantity or result.

B. Estimation / अनुमान → Using an ordered sequence of number names consistently when counting.

C. Counting principle / गणना सिद्धांत → Arranging mathematical tasks from accessible experiences toward greater complexity.

D. Inductive reasoning / आगमनात्मक तर्क→ Forming a tentative generalisation from observed cases.

Correct answer / सही उत्तर: D. Inductive reasoning / आगमनात्मक तर्क→ Forming a tentative generalisation from observed cases.

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 052 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Inductive reasoning / आगमनात्मक तर्क/ Pictorial representation / चित्रात्मक निरूपण)

A. Qualitative feedback / गुणात्मक प्रतिक्रिया → Pupils use geoboards and pattern blocks to investigate shapes.

B. Pictorial representation / चित्रात्मक निरूपण → The teacher explains how to improve the alignment of tens and ones.

C. Inductive reasoning / आगमनात्मक तर्क→ Pupils notice that adding two even numbers gives even results and test more cases.

D. Inductive reasoning / आगमनात्मक तर्क→ A pupil draws groups of circles to represent multiplication.

Correct answer / सही उत्तर: C. Inductive reasoning / आगमनात्मक तर्क→ Pupils notice that adding two even numbers gives even results and test more cases.

Explanation / व्याख्या

Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 053 • CORE PRACTICE · FORM 01

Identify the concept described: A regularity described by a relationship or rule.

A. Performance task / प्रदर्शन कार्य

B. Mathematical pattern / गणितीय पैटर्न

C. Estimation / अनुमान

D. Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: B. Mathematical pattern / गणितीय पैटर्न

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence.

MCQ 054 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children extend a repeating red-blue-blue sequence.

A. Task sequencing / कार्य क्रम

B. Mathematical pattern / गणितीय पैटर्न

C. Data handling / आँकड़ा प्रबंधन

D. Performance task / प्रदर्शन कार्य

Correct answer / सही उत्तर: B. Mathematical pattern / गणितीय पैटर्न

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence.

MCQ 055 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematical pattern / गणितीय पैटर्न?

A. Expressing relationships using mathematical symbols.

B. A regularity described by a relationship or rule.

C. An observable statement of expected mathematical learning.

D. A space or organised set of resources for exploring mathematical ideas.

Correct answer / सही उत्तर: B. A regularity described by a relationship or rule.

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence.

GyanTech Guru Ji

MCQ 056 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematical pattern / गणितीय पैटर्न?

A. Children use base-ten blocks to demonstrate regrouping.

B. Children extend a repeating red-blue-blue sequence.

C. A child counts each object once in a stable order.

D. Pupils plan how to distribute materials fairly and explain the solution.

Correct answer / सही उत्तर: B. Children extend a repeating red-blue-blue sequence.

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence.

MCQ 057 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) A regularity described by a relationship or rule. (2) Materials available in the community used for mathematical exploration.

A. Mathematical pattern / गणितीय पैटर्न | Local resources / स्थानीय संसाधन

B. Local resources / स्थानीय संसाधन | Mathematical pattern / गणितीय पैटर्न

C. Mathematical pattern / गणितीय पैटर्न | Qualitative feedback / गुणात्मक प्रतिक्रिया

D. Curriculum progression / पाठ्यचर्या प्रगति | Local resources / स्थानीय संसाधन

Correct answer / सही उत्तर: A. Mathematical pattern / गणितीय पैटर्न | Local resources / स्थानीय संसाधन

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence. Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

GyanTech Guru Ji

MCQ 058 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children extend a repeating red-blue-blue sequence. (2) A child counts each object once in a stable order.

A. Mathematical pattern / गणितीय पैटर्न | Mathematical competency / गणितीय दक्षता

B. Mathematical pattern / गणितीय पैटर्न | Counting principle / गणना सिद्धांत

C. Counting principle / गणना सिद्धांत | Mathematical pattern / गणितीय पैटर्न

D. Unit planning / इकाई योजना | Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: B. Mathematical pattern / गणितीय पैटर्न | Counting principle / गणना सिद्धांत

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence. Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

MCQ 059 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematical pattern / गणितीय पैटर्न and Estimation / अनुमान.

A. Finding a reasonable approximate quantity or result. | A regularity described by a relationship or rule.

B. A regularity described by a relationship or rule. | Finding a reasonable approximate quantity or result.

C. A regularity described by a relationship or rule. | Organising mathematical ideas in a coherent developmental sequence.

D. Understanding that the last count word gives the total number of objects. | Finding a reasonable approximate quantity or result.

Correct answer / सही उत्तर: B. A regularity described by a relationship or rule. | Finding a reasonable approximate quantity or result.

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence. Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 060 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematical pattern / गणितीय पैटर्न and Mathematical argument / गणितीय तर्क प्रस्तुति.

A. Children extend a repeating red-blue-blue sequence. | A child explains why two differently arranged shapes have equal area.

B. A pupil records an equal-groups situation as 4 × 3 = 12. | A child explains why two differently arranged shapes have equal area.

C. Children extend a repeating red-blue-blue sequence. | A pupil uses counters to demonstrate addition.

D. A child explains why two differently arranged shapes have equal area. | Children extend a repeating red-blue-blue sequence.

Correct answer / सही उत्तर: A. Children extend a repeating red-blue-blue sequence. | A child explains why two differently arranged shapes have equal area.

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence. Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area.

MCQ 061 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematical pattern / गणितीय पैटर्न / Qualitative feedback / गुणात्मक प्रतिक्रिया)

A. Mathematical argument / गणितीय तर्क प्रस्तुति → Sequencing related lessons to develop mathematical goals over time.

B. Mathematical pattern / गणितीय पैटर्न → Descriptive information about strengths and next steps in learning.

C. Qualitative feedback / गुणात्मक प्रतिक्रिया → Giving reasons to support a mathematical claim.

D. Mathematical pattern / गणितीय पैटर्न → A regularity described by a relationship or rule.

Correct answer / सही उत्तर: D. Mathematical pattern / गणितीय पैटर्न → A regularity described by a relationship or rule.

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence.

MCQ 062 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematical pattern / गणितीय पैटर्न / Mathematics textbook / गणित पाठ्यपुस्तक)

A. Mathematical pattern / गणितीय पैटर्न → A teacher adapts a book exercise into a hands-on activity.

B. Mathematics textbook / गणित पाठ्यपुस्तक → After counting five shells, a child answers how many without counting again.

C. Cardinality / गणन संख्या बोध → A pupil predicts which shape fits after a rotation.

D. Mathematical pattern / गणितीय पैटर्न → Children extend a repeating red-blue-blue sequence.

Correct answer / सही उत्तर: D. Mathematical pattern / गणितीय पैटर्न → Children extend a repeating red-blue-blue sequence.

Explanation / व्याख्या

Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence.

MCQ 063 • CORE PRACTICE · FORM 01

Identify the concept described: Creating meaningful mathematical questions from a situation.

A. Geometric reasoning / ज्यामितीय तर्क

B. Problem posing / समस्या निर्माण

C. Place value / स्थानीय मान

D. Summative assessment / संकलनात्मक आकलन

Correct answer / सही उत्तर: B. Problem posing / समस्या निर्माण

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

MCQ 064 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Pupils invent questions about quantities shown in a market picture.

A. Formative assessment / निर्माणात्मक आकलन

B. One-to-one correspondence / एक-एक संगति

C. Subitizing / त्वरित संख्या पहचान

D. Problem posing / समस्या निर्माण

Correct answer / सही उत्तर: D. Problem posing / समस्या निर्माण

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation.
Application: Pupils invent questions about quantities shown in a market picture.

MCQ 065 • CORE PRACTICE · FORM 03

Which explanation best defines Problem posing / समस्या निर्माण?

A. The value a digit has because of its position in a numeral.

B. Expressing relationships using mathematical symbols.

C. Creating meaningful mathematical questions from a situation.

D. Representing data with pictures or symbols and a key when needed.

Correct answer / सही उत्तर: C. Creating meaningful mathematical questions from a situation.

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation.
Application: Pupils invent questions about quantities shown in a market picture.

MCQ 066 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Problem posing / समस्या निर्माण?

A. Pupils invent questions about quantities shown in a market picture.

B. Pupils sort quadrilaterals according to their sides and angles.

C. A pupil explains why 49 plus 21 is close to 70 before calculating.

D. A teacher changes grouping after observing pupils' fraction strategies.

Correct answer / सही उत्तर: A. Pupils invent questions about quantities shown in a market picture.

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

MCQ 067 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Creating meaningful mathematical questions from a situation. (2) Applying mathematical understanding and processes in meaningful situations.

A. Mathematical competency / गणितीय दक्षता | Problem posing / समस्या निर्माण

B. Problem posing / समस्या निर्माण | Conservation of number / संख्या संरक्षण

C. Spatial thinking / स्थानिक चिंतन | Mathematical competency / गणितीय दक्षता

D. Problem posing / समस्या निर्माण | Mathematical competency / गणितीय दक्षता

Correct answer / सही उत्तर: D. Problem posing / समस्या निर्माण | Mathematical competency / गणितीय दक्षता

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture. Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

MCQ 068 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Pupils invent questions about quantities shown in a market picture. (2) Children use base-ten blocks to demonstrate regrouping.

A. Curriculum progression / पाठ्यचर्या प्रगति | Manipulatives / मूर्त शिक्षण सामग्री

B. Problem posing / समस्या निर्माण | Manipulatives / मूर्त शिक्षण सामग्री

C. Manipulatives / मूर्त शिक्षण सामग्री | Problem posing / समस्या निर्माण

D. Problem posing / समस्या निर्माण | Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: B. Problem posing / समस्या निर्माण | Manipulatives / मूर्त शिक्षण सामग्री

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture. Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas. Application: Children use base-ten blocks to demonstrate regrouping.

GyanTech Guru Ji

MCQ 069 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Problem posing / समस्या निर्माण and Local resources / स्थानीय संसाधन.

A. Creating meaningful mathematical questions from a situation. | Materials available in the community used for mathematical exploration.

B. Creating meaningful mathematical questions from a situation. | Arranging mathematical tasks from accessible experiences toward greater complexity.

C. Materials available in the community used for mathematical exploration. | Creating meaningful mathematical questions from a situation.

D. Examining learner mistakes to infer their underlying reasoning. | Materials available in the community used for mathematical exploration.

Correct answer / सही उत्तर: A. Creating meaningful mathematical questions from a situation. | Materials available in the community used for mathematical exploration.

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture. Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

MCQ 070 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Problem posing / समस्या निर्माण and Mathematical argument / गणितीय तर्क प्रस्तुति.

A. Pupils invent questions about quantities shown in a market picture. | A child explains why two differently arranged shapes have equal area.

B. Pupils invent questions about quantities shown in a market picture. | A child recognises that spreading five counters does not create more counters.

C. A child explains why two differently arranged shapes have equal area. | Pupils invent questions about quantities shown in a market picture.

D. A child gives one pencil to each pupil to check if there are enough. | A child explains why two differently arranged shapes have equal area.

Correct answer / सही उत्तर: A. Pupils invent questions about quantities shown in a market picture. | A child explains why two differently arranged shapes have equal area.

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture. Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area.

MCQ 071 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Problem posing / समस्या निर्माण / Place value / स्थानीय मान)

A. Summative assessment / संकलनात्मक आकलन → Finding a reasonable approximate quantity or result.

B. Place value / स्थानीय मान → Evaluating mathematics achievement after an instructional period.

C. Problem posing / समस्या निर्माण → Creating meaningful mathematical questions from a situation.

D. Problem posing / समस्या निर्माण → The value a digit has because of its position in a numeral.

Correct answer / सही उत्तर: C. Problem posing / समस्या निर्माण → Creating meaningful mathematical questions from a situation.

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation.
Application: Pupils invent questions about quantities shown in a market picture.

MCQ 072 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Problem posing / समस्या निर्माण / Unit planning / इकाई योजना)

A. Unit planning / इकाई योजना → The 4 in forty-two represents four tens.

B. Problem posing / समस्या निर्माण → A teacher plans several connected lessons on measurement.

C. Problem posing / समस्या निर्माण → Pupils invent questions about quantities shown in a market picture.

D. Place value / स्थानीय मान → A teacher adapts a book exercise into a hands-on activity.

Correct answer / सही उत्तर: C. Problem posing / समस्या निर्माण → Pupils invent questions about quantities shown in a market picture.

Explanation / व्याख्या

Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

Short-answer revision

Recall the idea before reading the model answer.

REVISION 01.01

Explain Abstraction / अमूर्तीकरण and give one classroom example.

Model answer: Representing common mathematical properties apart from particular objects. Children represent three apples and three stones with the same number 3.

REVISION 01.02

Explain Deductive reasoning / निगमनात्मक तर्क and give one classroom example.

Model answer: Drawing a conclusion that follows from accepted premises or rules. Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

REVISION 01.03

Explain Mathematization / गणितीकरण and give one classroom example.

Model answer: Expressing or analysing real situations using mathematical ideas. Children represent a sharing situation using division.

REVISION 01.04

Explain Mathematical language / गणितीय भाषा and give one classroom example.

Model answer: Using precise terms and symbols to communicate mathematical meaning. A pupil writes 7 > 5 to express a comparison.

GyanTech Guru Ji

REVISION 01.05

Explain Inductive reasoning / आगमनात्मक तर्क and give one classroom example.

Model answer: Forming a tentative generalisation from observed cases. Pupils notice that adding two even numbers gives even results and test more cases.

REVISION 01.06

Explain Mathematical pattern / गणितीय पैटर्न and give one classroom example.

Model answer: A regularity described by a relationship or rule. Children extend a repeating red-blue-blue sequence.

REVISION 01.07

Explain Problem posing / समस्या निर्माण and give one classroom example.

Model answer: Creating meaningful mathematical questions from a situation. Pupils invent questions about quantities shown in a market picture.

GyanTech Guru Ji

CHAPTER 02 • 92 MCQs • 9 REVISION PROMPTS

How Children Learn Mathematics

Important topics, examples, new classroom scenarios and core practice

Important topics & revision notes

One-to-one correspondence / एक-एक संगति

Matching exactly one element of one collection to each element of another.

Classroom example: A child gives one pencil to each pupil to check if there are enough.

Cardinality / गणन संख्या बोध

Understanding that the last count word gives the total number of objects.

Classroom example: After counting five shells, a child answers how many without counting again.

Seriation / क्रमबद्धता

Arranging items in order by a measurable property.

Classroom example: Children arrange sticks from shortest to longest.

Subitizing / त्वरित संख्या पहचान

Recognising a small quantity without counting each item individually.

Classroom example: A child immediately identifies three dots on a card.

Place value / स्थानीय मान

The value a digit has because of its position in a numeral.

Classroom example: The 4 in forty-two represents four tens.

Error analysis / त्रुटि विश्लेषण

Examining learner mistakes to infer their underlying reasoning.

Classroom example: A teacher asks why a child wrote 305 for thirty-five before planning support.

Conservation of number / संख्या संरक्षण

Understanding that number remains unchanged when objects are rearranged without adding or removing any.

Classroom example: A child recognises that spreading five counters does not create more counters.

Number sense / संख्या बोध

Flexible understanding of numbers, magnitudes and relationships.

Classroom example: A pupil explains why 49 plus 21 is close to 70 before calculating.

Counting principle / गणना सिद्धांत

Using an ordered sequence of number names consistently when counting.

Classroom example: A child counts each object once in a stable order.

New classroom-based questions

Apply concepts to realistic teaching decisions.

MCQ 073 • NEW CLASSROOM APPLICATION

A child says 305 means thirty-five. Which resource helps?

A. A list of unrelated shapes

B. A multiplication table only

C. A protractor

D. Base-ten blocks or a place-value chart with a zero tens position

Correct answer / सही उत्तर: D. Base-ten blocks or a place-value chart with a zero tens position

Explanation / व्याख्या

Concrete representations clarify positional value and the role of zero.

MCQ 074 • NEW CLASSROOM APPLICATION

A child thinks a spread-out row of six counters has more than a compact row of six. What should be explored?

A. Long division

B. Angle measurement

C. Alphabet order

D. One-to-one matching and conservation of number

Correct answer / सही उत्तर: D. One-to-one matching and conservation of number

Explanation / व्याख्या

Rearrangement changes spacing, not the number of objects.

GyanTech Guru Ji

Core question bank

Ten related practice formats; core concepts recur for revision.

MCQ 075 • CORE PRACTICE · FORM 01

Identify the concept described: Matching exactly one element of one collection to each element of another.

A. One-to-one correspondence / एक-एक संगति

B. Mathematical problem solving / गणितीय समस्या समाधान

C. Non-standard measurement / अमानक मापन

D. Open-ended task / मुक्त उत्तर कार्य

Correct answer / सही उत्तर: A. One-to-one correspondence / एक-एक संगति

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough.

MCQ 076 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A child gives one pencil to each pupil to check if there are enough.

A. Mathematical discussion / गणितीय चर्चा

B. Inductive reasoning / आगमनात्मक तर्क

C. One-to-one correspondence / एक-एक संगति

D. Problem posing / समस्या निर्माण

Correct answer / सही उत्तर: C. One-to-one correspondence / एक-एक संगति

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough.

MCQ 077 • CORE PRACTICE · FORM 03

Which explanation best defines One-to-one correspondence / एक-एक संगति?

A. Organising mathematical ideas in a coherent developmental sequence.

B. Matching exactly one element of one collection to each element of another.

C. Evaluating mathematics achievement after an instructional period.

D. Arranging mathematical tasks from accessible experiences toward greater complexity.

Correct answer / सही उत्तर: B. Matching exactly one element of one collection to each element of another.

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough.

MCQ 078 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates One-to-one correspondence / एक-एक संगति?

A. Each apple icon in a chart stands for two votes.

B. A teacher changes grouping after observing pupils' fraction strategies.

C. A pupil draws groups of circles to represent multiplication.

D. A child gives one pencil to each pupil to check if there are enough.

Correct answer / सही उत्तर: D. A child gives one pencil to each pupil to check if there are enough.

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough.

MCQ 079 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Matching exactly one element of one collection to each element of another. (2) Identifying and explaining spatial properties and relationships.

A. One-to-one correspondence / एक-एक संगति | Geometric reasoning / ज्यामितीय तर्क

B. Abstraction / अमूर्तीकरण | Geometric reasoning / ज्यामितीय तर्क

C. Geometric reasoning / ज्यामितीय तर्क| One-to-one correspondence / एक-एक संगति

D. One-to-one correspondence / एक-एक संगति | Mathematical representation / गणितीय निरूपण

Correct answer / सही उत्तर: A. One-to-one correspondence / एक-एक संगति | Geometric reasoning / ज्यामितीय तर्क

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough. Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 080 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A child gives one pencil to each pupil to check if there are enough. (2) A pupil exchanges ten unit cubes for a ten rod.

A. Estimation / अनुमान | Place-value blocks / स्थानीय मान ब्लॉक

B. One-to-one correspondence / एक-एक संगति | Open-ended task / मुक्त उत्तर कार्य

C. One-to-one correspondence / एक-एक संगति | Place-value blocks / स्थानीय मान ब्लॉक

D. Place-value blocks / स्थानीय मान ब्लॉक | One-to-one correspondence / एक-एक संगति

Correct answer / सही उत्तर: C. One-to-one correspondence / एक-एक संगति | Place-value blocks / स्थानीय मान ब्लॉक

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough. Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

MCQ 081 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for One-to-one correspondence / एक-एक संगति and Concrete representation / मूर्त निरूपण.

A. Criteria describing quality of mathematical reasoning and representation. | Showing mathematical relationships with actual objects.

B. Showing mathematical relationships with actual objects. | Matching exactly one element of one collection to each element of another.

C. Matching exactly one element of one collection to each element of another. | Showing mathematical relationships with actual objects.

D. Matching exactly one element of one collection to each element of another. | Creating meaningful mathematical questions from a situation.

Correct answer / सही उत्तर: C. Matching exactly one element of one collection to each element of another. | Showing mathematical relationships with actual objects.

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough. Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects. Application: A pupil uses counters to demonstrate addition.

MCQ 082 • CORE PRACTICE · FORM 08

Choose the examples, in order, for One-to-one correspondence / एक-एक संगति and Problem posing / समस्या निर्माण.

A. Pupils invent questions about quantities shown in a market picture. | A child gives one pencil to each pupil to check if there are enough.

B. A child gives one pencil to each pupil to check if there are enough. | Pupils plan how to distribute materials fairly and explain the solution.

C. A child gives one pencil to each pupil to check if there are enough. | Pupils invent questions about quantities shown in a market picture.

D. A lesson moves from equal groups to drawings and multiplication notation. | Pupils invent questions about quantities shown in a market picture.

Correct answer / सही उत्तर: C. A child gives one pencil to each pupil to check if there are enough. | Pupils invent questions about quantities shown in a market picture.

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

MCQ 083 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (One-to-one correspondence / एक-एक संगति / Concrete representation / मूर्त निरूपण)

A. Abstraction / अमूर्तीकरण → Expressing or analysing real situations using mathematical ideas.

B. One-to-one correspondence / एक-एक संगति → Matching exactly one element of one collection to each element of another.

C. Concrete representation / मूर्त निरूपण → Representing common mathematical properties apart from particular objects.

D. One-to-one correspondence / एक-एक संगति → Showing mathematical relationships with actual objects.

Correct answer / सही उत्तर: B. One-to-one correspondence / एक-एक संगति → Matching exactly one element of one collection to each element of another.

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough.

MCQ 084 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (One-to-one correspondence / एक-एक संगति / Deductive reasoning / निगमनात्मक तर्क)

A. Deductive reasoning / निगमनात्मक तर्क→ A teacher asks how a child obtained 402 when adding 23 and 19.

B. Diagnostic assessment / निदानात्मक आकलन → A teacher assesses explanation, strategy and accuracy separately.

C. One-to-one correspondence / एक-एक संगति → A child gives one pencil to each pupil to check if there are enough.

D. One-to-one correspondence / एक-एक संगति → Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

Correct answer / सही उत्तर: C. One-to-one correspondence / एक-एक संगति → A child gives one pencil to each pupil to check if there are enough.

Explanation / व्याख्या

One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough.

MCQ 085 • CORE PRACTICE · FORM 01

Identify the concept described: Understanding that the last count word gives the total number of objects.

A. Data handling / आँकड़ा प्रबंधन

B. Cardinality / गणन संख्या बोध

C. Mathematical argument / गणितीय तर्क प्रस्तुति

D. Inductive reasoning / आगमनात्मक तर्क

Correct answer / सही उत्तर: B. Cardinality / गणन संख्या बोध

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again.

MCQ 086 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? After counting five shells, a child answers how many without counting again.

A. Spatial thinking / स्थानिक चिंतन

B. Concrete representation / मूर्त निरूपण

C. Cardinality / गणन संख्या बोध

D. Task sequencing / कार्य क्रम

Correct answer / सही उत्तर: C. Cardinality / गणन संख्या बोध

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again.

MCQ 087 • CORE PRACTICE · FORM 03

Which explanation best defines Cardinality / गणन संख्या बोध?

A. Giving reasons to support a mathematical claim.

B. Understanding that the last count word gives the total number of objects.

C. Organising mathematical ideas in a coherent developmental sequence.

D. Showing mathematical relationships with actual objects.

Correct answer / सही उत्तर: B. Understanding that the last count word gives the total number of objects.

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again.

MCQ 088 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Cardinality / गणन संख्या बोध?

A. After counting five shells, a child answers how many without counting again.

B. The teacher explains how to improve the alignment of tens and ones.

C. A pupil draws equal groups to explain a multiplication expression.

D. Children extend a repeating red-blue-blue sequence.

Correct answer / सही उत्तर: A. After counting five shells, a child answers how many without counting again.

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again.

MCQ 089 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Understanding that the last count word gives the total number of objects. (2) Forming a tentative generalisation from observed cases.

A. Cardinality / गणन संख्या बोध | Mental mathematics / मानसिक गणना

B. Cardinality / गणन संख्या बोध | Inductive reasoning / आगमनात्मक तर्क

C. Pictograph / चित्रालेख | Inductive reasoning / आगमनात्मक तर्क

D. Inductive reasoning / आगमनात्मक तर्क| Cardinality / गणन संख्या बोध

Correct answer / सही उत्तर: B. Cardinality / गणन संख्या बोध | Inductive reasoning / आगमनात्मक तर्क

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again. Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 090 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) After counting five shells, a child answers how many without counting again. (2) A pupil records an equal-groups situation as 4 × 3 = 12.

A. Cardinality / गणन संख्या बोध | Symbolic representation / प्रतीकात्मक निरूपण

B. Symbolic representation / प्रतीकात्मक निरूपण | Cardinality / गणन संख्या बोध

C. Cardinality / गणन संख्या बोध | Mathematical language / गणितीय भाषा

D. Learning outcome / अधिगम प्रतिफल | Symbolic representation / प्रतीकात्मक निरूपण

Correct answer / सही उत्तर: A. Cardinality / गणन संख्या बोध | Symbolic representation / प्रतीकात्मक निरूपण

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again. Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12.

GyanTech

MCQ 091 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Cardinality / गणन संख्या बोध and Pictograph / चित्रालेख.

A. Measuring using informal repeatable units. | Representing data with pictures or symbols and a key when needed.

B. Understanding that the last count word gives the total number of objects. | A task allowing multiple valid solutions or approaches.

C. Understanding that the last count word gives the total number of objects. | Representing data with pictures or symbols and a key when needed.

D. Representing data with pictures or symbols and a key when needed. | Understanding that the last count word gives the total number of objects.

Correct answer / सही उत्तर: C. Understanding that the last count word gives the total number of objects. | Representing data with pictures or symbols and a key when needed.

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again. Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes.

MCQ 092 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Cardinality / गणन संख्या बोध and Open-ended task / मुक्त उत्तर कार्य.

A. Children find different pairs of whole numbers whose sum is ten. | After counting five shells, a child answers how many without counting again.

B. After counting five shells, a child answers how many without counting again. | Children find different pairs of whole numbers whose sum is ten.

C. A child estimates the number of pencils in a jar before counting. | Children find different pairs of whole numbers whose sum is ten.

D. After counting five shells, a child answers how many without counting again. | A pupil writes 7 > 5 to express a comparison.

Correct answer / सही उत्तर: B. After counting five shells, a child answers how many without counting again. | Children find different pairs of whole numbers whose sum is ten.

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again. Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches. Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 093 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Cardinality / गणन संख्या बोध / Learning outcome / अधिगम प्रतिफल)

A. Cardinality / गणन संख्या बोध → Understanding that the last count word gives the total number of objects.

B. Learning outcome / अधिगम प्रतिफल → Using flexible number relationships without written standard algorithms.

C. Mental mathematics / मानसिक गणना → Reasoning about shapes, positions and relationships in space.

D. Cardinality / गणन संख्या बोध → An observable statement of expected mathematical learning.

Correct answer / सही उत्तर: A. Cardinality / गणन संख्या बोध → Understanding that the last count word gives the total number of objects.

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again.

MCQ 094 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Cardinality / गणन संख्या बोध / Diagnostic assessment / निदानात्मक आकलन)

A. Cardinality / गणन संख्या बोध → A teacher asks how a child obtained 402 when adding 23 and 19.

B. Mathematical language / गणितीय भाषा → Pupils plan how to distribute materials fairly and explain the solution.

C. Diagnostic assessment / निदानात्मक आकलन → A pupil writes 7 > 5 to express a comparison.

D. Cardinality / गणन संख्या बोध → After counting five shells, a child answers how many without counting again.

Correct answer / सही उत्तर: D. Cardinality / गणन संख्या बोध → After counting five shells, a child answers how many without counting again.

Explanation / व्याख्या

Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again.

MCQ 095 • CORE PRACTICE · FORM 01

Identify the concept described: Arranging items in order by a measurable property.

A. Seriation / क्रमबद्धता

B. Place-value blocks / स्थानीय मान ब्लॉक

C. Mathematical representation / गणितीय निरूपण

D. Curriculum progression / पाठ्यचर्या प्रगति

Correct answer / सही उत्तर: A. Seriation / क्रमबद्धता

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest.

MCQ 096 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children arrange sticks from shortest to longest.

A. Pictograph / चित्रालेख

B. Seriation / क्रमबद्धता

C. Unit planning / इकाई योजना

D. Mathematical pattern / गणितीय पैटर्न

Correct answer / सही उत्तर: B. Seriation / क्रमबद्धता

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest.

MCQ 097 • CORE PRACTICE · FORM 03

Which explanation best defines Seriation / क्रमबद्धता?

A. Using precise terms and symbols to communicate mathematical meaning.

B. Materials available in the community used for mathematical exploration.

C. Allowing different valid methods for solving a problem.

D. Arranging items in order by a measurable property.

Correct answer / सही उत्तर: D. Arranging items in order by a measurable property.

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest.

MCQ 098 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Seriation / क्रमबद्धता?

A. A pupil exchanges ten unit cubes for a ten rod.

B. Children arrange sticks from shortest to longest.

C. A pupil records an equal-groups situation as 4 × 3 = 12.

D. Counting and grouping experiences precede formal multiplication notation.

Correct answer / सही उत्तर: B. Children arrange sticks from shortest to longest.

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest.

MCQ 099 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Arranging items in order by a measurable property. (2) Materials representing units, tens and other base-ten groupings.

A. Manipulatives / मूर्त शिक्षण सामग्री | Place-value blocks / स्थानीय मान ब्लॉक

B. Seriation / क्रमबद्धता | Diagnostic assessment / निदानात्मक आकलन

C. Seriation / क्रमबद्धता | Place-value blocks / स्थानीय मान ब्लॉक

D. Place-value blocks / स्थानीय मान ब्लॉक | Seriation / क्रमबद्धता

Correct answer / सही उत्तर: C. Seriation / क्रमबद्धता | Place-value blocks / स्थानीय मान ब्लॉक

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest. Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

GyanTech Guru Ji

MCQ 100 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children arrange sticks from shortest to longest. (2) A child estimates the number of pencils in a jar before counting.

A. Seriation / क्रमबद्धता | Estimation / अनुमान

B. Estimation / अनुमान | Seriation / क्रमबद्धता

C. Performance task / प्रदर्शन कार्य | Estimation / अनुमान

D. Seriation / क्रमबद्धता | Curriculum progression / पाठ्यचर्या प्रगति

Correct answer / सही उत्तर: A. Seriation / क्रमबद्धता | Estimation / अनुमान

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest. Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

GyanTech Guru Ji

MCQ 101 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Seriation / क्रमबद्धता and Manipulatives / मूर्त शिक्षण सामग्री.

A. Physical objects learners handle to explore mathematical ideas. | Arranging items in order by a measurable property.

B. Arranging items in order by a measurable property. | Evaluating mathematics achievement after an instructional period.

C. Arranging items in order by a measurable property. | Physical objects learners handle to explore mathematical ideas.

D. Applying mathematical understanding and processes in meaningful situations. | Physical objects learners handle to explore mathematical ideas.

Correct answer / सही उत्तर: C. Arranging items in order by a measurable property. | Physical objects learners handle to explore mathematical ideas.

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest. Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas. Application: Children use base-ten blocks to demonstrate regrouping.

MCQ 102 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Seriation / क्रमबद्धता and Concrete representation / मूर्त निरूपण.

A. A pupil uses counters to demonstrate addition. | Children arrange sticks from shortest to longest.

B. Children arrange sticks from shortest to longest. | A lesson moves from equal groups to drawings and multiplication notation.

C. Children arrange sticks from shortest to longest. | A pupil uses counters to demonstrate addition.

D. A teacher asks how a child obtained 402 when adding 23 and 19. | A pupil uses counters to demonstrate addition.

Correct answer / सही उत्तर: C. Children arrange sticks from shortest to longest. | A pupil uses counters to demonstrate addition.

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest. Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects. Application: A pupil uses counters to demonstrate addition.

MCQ 103 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Seriation / क्रमबद्धता / Mathematical argument / गणितीय तर्क प्रस्तुति)

A. Seriation / क्रमबद्धता → Giving reasons to support a mathematical claim.

B. Seriation / क्रमबद्धता → Arranging items in order by a measurable property.

C. Mathematical argument / गणितीय तर्क प्रस्तुति → Expressing relationships using mathematical symbols.

D. Symbolic representation / प्रतीकात्मक निरूपण → Forming a tentative generalisation from observed cases.

Correct answer / सही उत्तर: B. Seriation / क्रमबद्धता → Arranging items in order by a measurable property.

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest.

GyanTech Guru Ji

MCQ 104 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Seriation / क्रमबद्धता / Pictorial representation / चित्रात्मक निरूपण)

A. Pictorial representation / चित्रात्मक निरूपण → Children represent a sharing situation using division.

B. Seriation / क्रमबद्धता → A pupil draws groups of circles to represent multiplication.

C. Seriation / क्रमबद्धता → Children arrange sticks from shortest to longest.

D. Mathematization / गणितीकरण → A teacher changes grouping after observing pupils' fraction strategies.

Correct answer / सही उत्तर: C. Seriation / क्रमबद्धता → Children arrange sticks from shortest to longest.

Explanation / व्याख्या

Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest.

MCQ 105 • CORE PRACTICE · FORM 01

Identify the concept described: Recognising a small quantity without counting each item individually.

A. Subitizing / त्वरित संख्या पहचान

B. Learning outcome / अधिगम प्रतिफल

C. Mathematical argument / गणितीय तर्क प्रस्तुति

D. Mathematical language / गणितीय भाषा

Correct answer / सही उत्तर: A. Subitizing / त्वरित संख्या पहचान

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

MCQ 106 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A child immediately identifies three dots on a card.

A. Number line / संख्या रेखा

B. Mathematical competency / गणितीय दक्षता

C. Subitizing / त्वरित संख्या पहचान

D. Performance task / प्रदर्शन कार्य

Correct answer / सही उत्तर: C. Subitizing / त्वरित संख्या पहचान

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

MCQ 107 • CORE PRACTICE · FORM 03

Which explanation best defines Subitizing / त्वरित संख्या पहचान?

A. Applying mathematical understanding and processes in meaningful situations.

B. Recognising a small quantity without counting each item individually.

C. Finding a reasonable approximate quantity or result.

D. Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

Correct answer / सही उत्तर: B. Recognising a small quantity without counting each item individually.

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

GyanTech Guru Ji

MCQ 108 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Subitizing / त्वरित संख्या पहचान?

A. The teacher explains how to improve the alignment of tens and ones.

B. Children share 12 counters among three groups.

C. A child immediately identifies three dots on a card.

D. Counting and grouping experiences precede formal multiplication notation.

Correct answer / सही उत्तर: C. A child immediately identifies three dots on a card.

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

MCQ 109 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Recognising a small quantity without counting each item individually. (2) Using precise terms and symbols to communicate mathematical meaning.

A. Subitizing / त्वरित संख्या पहचान | Mathematical language / गणितीय भाषा

B. Subitizing / त्वरित संख्या पहचान | Mathematical representation / गणितीय निरूपण

C. Mathematical language / गणितीय भाषा | Subitizing / त्वरित संख्या पहचान

D. Mathematical competency / गणितीय दक्षता | Mathematical language / गणितीय भाषा

Correct answer / सही उत्तर: A. Subitizing / त्वरित संख्या पहचान | Mathematical language / गणितीय भाषा

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card. Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

GyanTech Guru Ji

MCQ 110 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A child immediately identifies three dots on a card. (2) A pupil records an equal-groups situation as 4 × 3 = 12.

A. Subitizing / त्वरित संख्या पहचान | Symbolic representation / प्रतीकात्मक निरूपण

B. Data handling / आँकड़ा प्रबंधन | Symbolic representation / प्रतीकात्मक निरूपण

C. Subitizing / त्वरित संख्या पहचान | Formative assessment / निर्माणात्मक आकलन

D. Symbolic representation / प्रतीकात्मक निरूपण | Subitizing / त्वरित संख्या पहचान

Correct answer / सही उत्तर: A. Subitizing / त्वरित संख्या पहचान | Symbolic representation / प्रतीकात्मक निरूपण

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card. Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12.

GyanTech Guru Ji

MCQ 111 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Subitizing / त्वरित संख्या पहचान and Mathematics textbook / गणित पाठ्यपुस्तक.

A. Recognising a small quantity without counting each item individually. | Showing mathematical relationships with actual objects.

B. Recognising a small quantity without counting each item individually. | A structured resource whose activities can support mathematical understanding.

C. A structured resource whose activities can support mathematical understanding. | Recognising a small quantity without counting each item individually.

D. Forming a tentative generalisation from observed cases. | A structured resource whose activities can support mathematical understanding.

Correct answer / सही उत्तर: B. Recognising a small quantity without counting each item individually. | A structured resource whose activities can support mathematical understanding.

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card. Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 112 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Subitizing / त्वरित संख्या पहचान and Data handling / आँकड़ा प्रबंधन.

A. A child immediately identifies three dots on a card. | A teacher asks how a child obtained 402 when adding 23 and 19.

B. A teacher adapts a book exercise into a hands-on activity. | Children tally classmates' favourite fruits and compare frequencies.

C. Children tally classmates' favourite fruits and compare frequencies. | A child immediately identifies three dots on a card.

D. A child immediately identifies three dots on a card. | Children tally classmates' favourite fruits and compare frequencies.

Correct answer / सही उत्तर: D. A child immediately identifies three dots on a card. | Children tally classmates' favourite fruits and compare frequencies.

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card. Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

MCQ 113 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Subitizing / त्वरित संख्या पहचान / Place-value blocks / स्थानीय मान ब्लॉक)

A. Subitizing / त्वरित संख्या पहचान → Recognising a small quantity without counting each item individually.

B. Mathematical representation / गणितीय निरूपण → Measuring using informal repeatable units.

C. Subitizing / त्वरित संख्या पहचान → Materials representing units, tens and other base-ten groupings.

D. Place-value blocks / स्थानीय मान ब्लॉक → Expressing ideas through objects, pictures, symbols or language.

Correct answer / सही उत्तर: A. Subitizing / त्वरित संख्या पहचान → Recognising a small quantity without counting each item individually.

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

MCQ 114 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Subitizing / त्वरित संख्या पहचान / Abstraction / अमूर्तीकरण)

A. Qualitative feedback / गुणात्मक प्रतिक्रिया → Children use base-ten blocks to demonstrate regrouping.

B. Subitizing / त्वरित संख्या पहचान → Children represent three apples and three stones with the same number 3.

C. Subitizing / त्वरित संख्या पहचान → A child immediately identifies three dots on a card.

D. Abstraction / अमूर्तीकरण → The teacher explains how to improve the alignment of tens and ones.

Correct answer / सही उत्तर: C. Subitizing / त्वरित संख्या पहचान → A child immediately identifies three dots on a card.

Explanation / व्याख्या

Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

MCQ 115 • CORE PRACTICE · FORM 01

Identify the concept described: The value a digit has because of its position in a numeral.

A. Place value / स्थानीय मान

B. Estimation / अनुमान

C. Symbolic representation / प्रतीकात्मक निरूपण

D. Performance task / प्रदर्शन कार्य

Correct answer / सही उत्तर: A. Place value / स्थानीय मान

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens.

MCQ 116 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? The 4 in forty-two represents four tens.

A. Mathematical rubric / गणितीय मानदंड तालिका

B. Place value / स्थानीय मान

C. Inductive reasoning / आगमनात्मक तर्क

D. Mathematics laboratory / गणित प्रयोगशाला

Correct answer / सही उत्तर: B. Place value / स्थानीय मान

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens.

MCQ 117 • CORE PRACTICE · FORM 03

Which explanation best defines Place value / स्थानीय मान?

A. Materials representing units, tens and other base-ten groupings.

B. Criteria describing quality of mathematical reasoning and representation.

C. Applying mathematical understanding and processes in meaningful situations.

D. The value a digit has because of its position in a numeral.

Correct answer / सही उत्तर: D. The value a digit has because of its position in a numeral.

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens.

MCQ 118 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Place value / स्थानीय मान?

A. A teacher assesses explanation, strategy and accuracy separately.

B. The 4 in forty-two represents four tens.

C. Pupils invent questions about quantities shown in a market picture.

D. A pupil can compare two lengths using the same unit.

Correct answer / सही उत्तर: B. The 4 in forty-two represents four tens.

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens.

MCQ 119 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) The value a digit has because of its position in a numeral. (2) Using flexible number relationships without written standard algorithms.

A. Mental mathematics / मानसिक गणना | Place value / स्थानीय मान

B. Local resources / स्थानीय संसाधन | Mental mathematics / मानसिक गणना

C. Place value / स्थानीय मान | Performance task / प्रदर्शन कार्य

D. Place value / स्थानीय मान | Mental mathematics / मानसिक गणना

Correct answer / सही उत्तर: D. Place value / स्थानीय मान | Mental mathematics / मानसिक गणना

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens. Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

GyanTech Guru Ji

MCQ 120 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) The 4 in forty-two represents four tens. (2) Children tally classmates' favourite fruits and compare frequencies.

A. Place value / स्थानीय मान | Local resources / स्थानीय संसाधन

B. Data handling / आँकड़ा प्रबंधन | Place value / स्थानीय मान

C. Place value / स्थानीय मान | Data handling / आँकड़ा प्रबंधन

D. Manipulatives / मूर्त शिक्षण सामग्री | Data handling / आँकड़ा प्रबंधन

Correct answer / सही उत्तर: C. Place value / स्थानीय मान | Data handling / आँकड़ा प्रबंधन

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens. Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

GyanTech Guru Ji

MCQ 121 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Place value / स्थानीय मान and Manipulatives / मूर्त शिक्षण सामग्री.

A. An observable statement of expected mathematical learning. | Physical objects learners handle to explore mathematical ideas.

B. The value a digit has because of its position in a numeral. | A linear representation of ordered numerical positions.

C. Physical objects learners handle to explore mathematical ideas. | The value a digit has because of its position in a numeral.

D. The value a digit has because of its position in a numeral. | Physical objects learners handle to explore mathematical ideas.

Correct answer / सही उत्तर: D. The value a digit has because of its position in a numeral. | Physical objects learners handle to explore mathematical ideas.

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens. Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas. Application: Children use base-ten blocks to demonstrate regrouping.

MCQ 122 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Place value / स्थानीय मान and Manipulatives / मूर्त शिक्षण सामग्री.

A. The 4 in forty-two represents four tens. | Children use base-ten blocks to demonstrate regrouping.

B. The 4 in forty-two represents four tens. | A pupil predicts which shape fits after a rotation.

C. Children use base-ten blocks to demonstrate regrouping. | The 4 in forty-two represents four tens.

D. Children find different pairs of whole numbers whose sum is ten. | Children use base-ten blocks to demonstrate regrouping.

Correct answer / सही उत्तर: A. The 4 in forty-two represents four tens. | Children use base-ten blocks to demonstrate regrouping.

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens. Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas. Application: Children use base-ten blocks to demonstrate regrouping.

MCQ 123 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Place value / स्थानीय मान / Problem posing / समस्या निर्माण)

A. Manipulatives / मूर्त शिक्षण सामग्री → A structured resource whose activities can support mathematical understanding.

B. Place value / स्थानीय मान → The value a digit has because of its position in a numeral.

C. Problem posing / समस्या निर्माण → Physical objects learners handle to explore mathematical ideas.

D. Place value / स्थानीय मान → Creating meaningful mathematical questions from a situation.

Correct answer / सही उत्तर: B. Place value / स्थानीय मान → The value a digit has because of its position in a numeral.

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens.

GyanTech Guru Ji

MCQ 124 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Place value / स्थानीय मान / Geometric reasoning / ज्यामितीय तर्क)

A. Open-ended task / मुक्त उत्तर कार्य → Counting and grouping experiences precede formal multiplication notation.

B. Geometric reasoning / ज्यामितीय तर्क→ Children find different pairs of whole numbers whose sum is ten.

C. Place value / स्थानीय मान → The 4 in forty-two represents four tens.

D. Place value / स्थानीय मान → Pupils sort quadrilaterals according to their sides and angles.

Correct answer / सही उत्तर: C. Place value / स्थानीय मान → The 4 in forty-two represents four tens.

Explanation / व्याख्या

Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens.

MCQ 125 • CORE PRACTICE · FORM 01

Identify the concept described: Examining learner mistakes to infer their underlying reasoning.

A. Error analysis / त्रुटि विश्लेषण

B. Curriculum progression / पाठ्यचर्या प्रगति

C. Qualitative feedback / गुणात्मक प्रतिक्रिया

D. Mathematical argument / गणितीय तर्क प्रस्तुति

Correct answer / सही उत्तर: A. Error analysis / त्रुटि विश्लेषण

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning. Application: A teacher asks why a child wrote 305 for thirty-five before planning support.

MCQ 126 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A teacher asks why a child wrote 305 for thirty-five before planning support.

A. Formative assessment / निर्माणात्मक आकलन

B. Concrete representation / मूर्त निरूपण

C. Error analysis / त्रुटि विश्लेषण

D. Mathematical problem solving / गणितीय समस्या समाधान

Correct answer / सही उत्तर: C. Error analysis / त्रुटि विश्लेषण

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning.
Application: A teacher asks why a child wrote 305 for thirty-five before planning support.

MCQ 127 • CORE PRACTICE · FORM 03

Which explanation best defines Error analysis / त्रुटि विश्लेषण?

A. Criteria describing quality of mathematical reasoning and representation.

B. Reasoning about shapes, positions and relationships in space.

C. Materials representing units, tens and other base-ten groupings.

D. Examining learner mistakes to infer their underlying reasoning.

Correct answer / सही उत्तर: D. Examining learner mistakes to infer their underlying reasoning.

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning.
Application: A teacher asks why a child wrote 305 for thirty-five before planning support.

MCQ 128 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Error analysis / त्रुटि विश्लेषण?

A. A teacher plans several connected lessons on measurement.

B. A teacher asks how a child obtained 402 when adding 23 and 19.

C. Children use market price labels for a money comparison task.

D. A teacher asks why a child wrote 305 for thirty-five before planning support.

Correct answer / सही उत्तर: D. A teacher asks why a child wrote 305 for thirty-five before planning support.

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning. Application: A teacher asks why a child wrote 305 for thirty-five before planning support.

MCQ 129 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Examining learner mistakes to infer their underlying reasoning. (2) Materials representing units, tens and other base-ten groupings.

A. Pictograph / चित्रालेख | Place-value blocks / स्थानीय मान ब्लॉक

B. Error analysis / त्रुटि विश्लेषण | Multiple strategies / अनेक रणनीतियाँ

C. Error analysis / त्रुटि विश्लेषण | Place-value blocks / स्थानीय मान ब्लॉक

D. Place-value blocks / स्थानीय मान ब्लॉक | Error analysis / त्रुटि विश्लेषण

Correct answer / सही उत्तर: C. Error analysis / त्रुटि विश्लेषण | Place-value blocks / स्थानीय मान ब्लॉक

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning. Application: A teacher asks why a child wrote 305 for thirty-five before planning support. Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

MCQ 130 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A teacher asks why a child wrote 305 for thirty-five before planning support. (2) Children represent a sharing situation using division.

A. Error analysis / त्रुटि विश्लेषण | Formative assessment / निर्माणात्मक आकलन

B. Error analysis / त्रुटि विश्लेषण | Mathematization / गणितीकरण

C. Mathematization / गणितीकरण | Error analysis / त्रुटि विश्लेषण

D. Mathematical discussion / गणितीय चर्चा | Mathematization / गणितीकरण

Correct answer / सही उत्तर: B. Error analysis / त्रुटि विश्लेषण | Mathematization / गणितीकरण

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning.
Application: A teacher asks why a child wrote 305 for thirty-five before planning support.
Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas.
Application: Children represent a sharing situation using division.

GyanTech Guru Ji

MCQ 131 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Error analysis / त्रुटि विश्लेषण and Number line / संख्या रेखा.

A. A linear representation of ordered numerical positions. | Examining learner mistakes to infer their underlying reasoning.

B. A regularity described by a relationship or rule. | A linear representation of ordered numerical positions.

C. Examining learner mistakes to infer their underlying reasoning. | Investigating particular errors or gaps in mathematical understanding.

D. Examining learner mistakes to infer their underlying reasoning. | A linear representation of ordered numerical positions.

Correct answer / सही उत्तर: D. Examining learner mistakes to infer their underlying reasoning. | A linear representation of ordered numerical positions.

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning. Application: A teacher asks why a child wrote 305 for thirty-five before planning support. Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps.

MCQ 132 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Error analysis / त्रुटि विश्लेषण and Curriculum progression / पाठ्यचर्या प्रगति.

A. A teacher asks why a child wrote 305 for thirty-five before planning support. | A teacher assesses explanation, strategy and accuracy separately.

B. Counting and grouping experiences precede formal multiplication notation. | A teacher asks why a child wrote 305 for thirty-five before planning support.

C. A pupil draws equal groups to explain a multiplication expression. | Counting and grouping experiences precede formal multiplication notation.

D. A teacher asks why a child wrote 305 for thirty-five before planning support. | Counting and grouping experiences precede formal multiplication notation.

Correct answer / सही उत्तर: D. A teacher asks why a child wrote 305 for thirty-five before planning support. | Counting and grouping experiences precede formal multiplication notation.

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning. Application: A teacher asks why a child wrote 305 for thirty-five before planning support. Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 133 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Error analysis / त्रुटि विश्लेषण / Pictorial representation / चित्रात्मक निरूपण)

A. Error analysis / त्रुटि विश्लेषण → Examining learner mistakes to infer their underlying reasoning.

B. Mathematical pattern / गणितीय पैटर्न → Evaluating mathematics achievement after an instructional period.

C. Error analysis / त्रुटि विश्लेषण → Showing mathematical relationships with drawings or diagrams.

D. Pictorial representation / चित्रात्मक निरूपण → A regularity described by a relationship or rule.

Correct answer / सही उत्तर: A. Error analysis / त्रुटि विश्लेषण → Examining learner mistakes to infer their underlying reasoning.

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning.
Application: A teacher asks why a child wrote 305 for thirty-five before planning support.

MCQ 134 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Error analysis / त्रुटि विश्लेषण / Geometric reasoning / ज्यामितीय तर्क)

A. Error analysis / त्रुटि विश्लेषण → Pupils sort quadrilaterals according to their sides and angles.

B. Geometric reasoning / ज्यामितीय तर्क→ Children represent three apples and three stones with the same number 3.

C. Abstraction / अमूर्तीकरण → A child explains why two differently arranged shapes have equal area.

D. Error analysis / त्रुटि विश्लेषण → A teacher asks why a child wrote 305 for thirty-five before planning support.

Correct answer / सही उत्तर: D. Error analysis / त्रुटि विश्लेषण → A teacher asks why a child wrote 305 for thirty-five before planning support.

Explanation / व्याख्या

Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning.
Application: A teacher asks why a child wrote 305 for thirty-five before planning support.

MCQ 135 • CORE PRACTICE · FORM 01

Identify the concept described: Understanding that number remains unchanged when objects are rearranged without adding or removing any.

A. Learning outcome / अधिगम प्रतिफल

B. Mathematical representation / गणितीय निरूपण

C. Summative assessment / संकलनात्मक आकलन

D. Conservation of number / संख्या संरक्षण

Correct answer / सही उत्तर: D. Conservation of number / संख्या संरक्षण

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters.

MCQ 136 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A child recognises that spreading five counters does not create more counters.

A. Qualitative feedback / गुणात्मक प्रतिक्रिया

B. Multiple strategies / अनेक रणनीतियाँ

C. Pictograph / चित्रालेख

D. Conservation of number / संख्या संरक्षण

Correct answer / सही उत्तर: D. Conservation of number / संख्या संरक्षण

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters.

MCQ 137 • CORE PRACTICE · FORM 03

Which explanation best defines Conservation of number / संख्या संरक्षण?

A. Drawing a conclusion that follows from accepted premises or rules.

B. Expressing or analysing real situations using mathematical ideas.

C. Understanding that number remains unchanged when objects are rearranged without adding or removing any.

D. Sharing, comparing and justifying ways of solving a problem.

Correct answer / सही उत्तर: C. Understanding that number remains unchanged when objects are rearranged without adding or removing any.

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters.

MCQ 138 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Conservation of number / संख्या संरक्षण?

A. A pupil records an equal-groups situation as 4 × 3 = 12.

B. A child recognises that spreading five counters does not create more counters.

C. A lesson moves from equal groups to drawings and multiplication notation.

D. Pupils use geoboards and pattern blocks to investigate shapes.

Correct answer / सही उत्तर: B. A child recognises that spreading five counters does not create more counters.

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters.

MCQ 139 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Understanding that number remains unchanged when objects are rearranged without adding or removing any. (2) Showing mathematical relationships with drawings or diagrams.

A. Conservation of number / संख्या संरक्षण | Number line / संख्या रेखा

B. Pictorial representation / चित्रात्मक निरूपण | Conservation of number / संख्या संरक्षण

C. Mathematization / गणितीकरण | Pictorial representation / चित्रात्मक निरूपण

D. Conservation of number / संख्या संरक्षण | Pictorial representation / चित्रात्मक निरूपण

Correct answer / सही उत्तर: D. Conservation of number / संख्या संरक्षण | Pictorial representation / चित्रात्मक निरूपण

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters. Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication.

MCQ 140 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A child recognises that spreading five counters does not create more counters. (2) Two pupils solve 18 + 7 by counting on and by making twenty.

A. Conservation of number / संख्या संरक्षण | Performance task / प्रदर्शन कार्य

B. Multiple strategies / अनेक रणनीतियाँ | Conservation of number / संख्या संरक्षण

C. Deductive reasoning / निगमनात्मक तर्क| Multiple strategies / अनेक रणनीतियाँ

D. Conservation of number / संख्या संरक्षण | Multiple strategies / अनेक रणनीतियाँ

Correct answer / सही उत्तर: D. Conservation of number / संख्या संरक्षण | Multiple strategies / अनेक रणनीतियाँ

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters. Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem. Application: Two pupils solve 18 + 7 by counting on and by making twenty.

MCQ 141 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Conservation of number / संख्या संरक्षण and Place-value blocks / स्थानीय मान ब्लॉक.

A. Understanding that number remains unchanged when objects are rearranged without adding or removing any. | Materials representing units, tens and other base-ten groupings.

B. A task requiring demonstration of mathematical knowledge in action. | Materials representing units, tens and other base-ten groupings.

C. Understanding that number remains unchanged when objects are rearranged without adding or removing any. | Creating meaningful mathematical questions from a situation.

D. Materials representing units, tens and other base-ten groupings. | Understanding that number remains unchanged when objects are rearranged without adding or removing any.

Correct answer / सही उत्तर: A. Understanding that number remains unchanged when objects are rearranged without adding or removing any. | Materials representing units, tens and other base-ten groupings.

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters. Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

MCQ 142 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Conservation of number / संख्या संरक्षण and Qualitative feedback / गुणात्मक प्रतिक्रिया.

A. Pupils notice that adding two even numbers gives even results and test more cases. | The teacher explains how to improve the alignment of tens and ones.

B. The teacher explains how to improve the alignment of tens and ones. | A child recognises that spreading five counters does not create more counters.

C. A child recognises that spreading five counters does not create more counters. | The teacher explains how to improve the alignment of tens and ones.

D. A child recognises that spreading five counters does not create more counters. | Each apple icon in a chart stands for two votes.

Correct answer / सही उत्तर: C. A child recognises that spreading five counters does not create more counters. | The teacher explains how to improve the alignment of tens and ones.

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters. Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

MCQ 143 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Conservation of number / संख्या संरक्षण / Multiple strategies / अनेक रणनीतियाँ)

A. Conservation of number / संख्या संरक्षण → Understanding that number remains unchanged when objects are rearranged without adding or removing any.

B. Number line / संख्या रेखा → Expressing or analysing real situations using mathematical ideas.

C. Multiple strategies / अनेक रणनीतियाँ → A linear representation of ordered numerical positions.

D. Conservation of number / संख्या संरक्षण → Allowing different valid methods for solving a problem.

Correct answer / सही उत्तर: A. Conservation of number / संख्या संरक्षण → Understanding that number remains unchanged when objects are rearranged without adding or removing any.

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters.

MCQ 144 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Conservation of number / संख्या संरक्षण / Unit planning / इकाई योजना)

A. Unit planning / इकाई योजना → Pupils notice that adding two even numbers gives even results and test more cases.

B. Conservation of number / संख्या संरक्षण → A child recognises that spreading five counters does not create more counters.

C. Conservation of number / संख्या संरक्षण → A teacher plans several connected lessons on measurement.

D. Inductive reasoning / आगमनात्मक तर्क→ Children use market price labels for a money comparison task.

Correct answer / सही उत्तर: B. Conservation of number / संख्या संरक्षण → A child recognises that spreading five counters does not create more counters.

Explanation / व्याख्या

Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters.

MCQ 145 • CORE PRACTICE · FORM 01

Identify the concept described: Flexible understanding of numbers, magnitudes and relationships.

A. Mathematics laboratory / गणित प्रयोगशाला

B. Deductive reasoning / निगमनात्मक तर्क

C. Number sense / संख्या बोध

D. Mathematical argument / गणितीय तर्क प्रस्तुति

Correct answer / सही उत्तर: C. Number sense / संख्या बोध

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships.
Application: A pupil explains why 49 plus 21 is close to 70 before calculating.

MCQ 146 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil explains why 49 plus 21 is close to 70 before calculating.

A. Mathematical argument / गणितीय तर्क प्रस्तुति

B. Place-value blocks / स्थानीय मान ब्लॉक

C. Diagnostic assessment / निदानात्मक आकलन

D. Number sense / संख्या बोध

Correct answer / सही उत्तर: D. Number sense / संख्या बोध

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships.
Application: A pupil explains why 49 plus 21 is close to 70 before calculating.

MCQ 147 • CORE PRACTICE · FORM 03

Which explanation best defines Number sense / संख्या बोध?

A. Applying mathematical understanding and processes in meaningful situations.

B. Flexible understanding of numbers, magnitudes and relationships.

C. Physical objects learners handle to explore mathematical ideas.

D. A structured resource whose activities can support mathematical understanding.

Correct answer / सही उत्तर: B. Flexible understanding of numbers, magnitudes and relationships.

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships.
Application: A pupil explains why 49 plus 21 is close to 70 before calculating.

MCQ 148 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Number sense / संख्या बोध?

A. A learner chooses an appropriate unit to measure a desk.

B. A child explains why two differently arranged shapes have equal area.

C. Children use market price labels for a money comparison task.

D. A pupil explains why 49 plus 21 is close to 70 before calculating.

Correct answer / सही उत्तर: D. A pupil explains why 49 plus 21 is close to 70 before calculating.

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships.
Application: A pupil explains why 49 plus 21 is close to 70 before calculating.

MCQ 149 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Flexible understanding of numbers, magnitudes and relationships. (2) A linear representation of ordered numerical positions.

A. Estimation / अनुमान | Number line / संख्या रेखा

B. Number sense / संख्या बोध | Pictorial representation / चित्रात्मक निरूपण

C. Number sense / संख्या बोध | Number line / संख्या रेखा

D. Number line / संख्या रेखा | Number sense / संख्या बोध

Correct answer / सही उत्तर: C. Number sense / संख्या बोध | Number line / संख्या रेखा

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships. Application: A pupil explains why 49 plus 21 is close to 70 before calculating. Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps.

GyanTech Guru Ji

MCQ 150 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil explains why 49 plus 21 is close to 70 before calculating. (2) A teacher changes grouping after observing pupils' fraction strategies.

A. Formative assessment / निर्माणात्मक आकलन | Number sense / संख्या बोध

B. Pictograph / चित्रालेख | Formative assessment / निर्माणात्मक आकलन

C. Number sense / संख्या बोध | Formative assessment / निर्माणात्मक आकलन

D. Number sense / संख्या बोध | Mathematical language / गणितीय भाषा

Correct answer / सही उत्तर: C. Number sense / संख्या बोध | Formative assessment / निर्माणात्मक आकलन

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships. Application: A pupil explains why 49 plus 21 is close to 70 before calculating. Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

GyanTech

MCQ 151 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Number sense / संख्या बोध and Mathematical representation / गणितीय निरूपण.

A. Applying mathematical understanding and processes in meaningful situations. | Expressing ideas through objects, pictures, symbols or language.

B. Flexible understanding of numbers, magnitudes and relationships. | Expressing ideas through objects, pictures, symbols or language.

C. Flexible understanding of numbers, magnitudes and relationships. | A space or organised set of resources for exploring mathematical ideas.

D. Expressing ideas through objects, pictures, symbols or language. | Flexible understanding of numbers, magnitudes and relationships.

Correct answer / सही उत्तर: B. Flexible understanding of numbers, magnitudes and relationships. | Expressing ideas through objects, pictures, symbols or language.

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships. Application: A pupil explains why 49 plus 21 is close to 70 before calculating. Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

MCQ 152 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Number sense / संख्या बोध and Summative assessment / संकलनात्मक आकलन.

A. A pupil explains why 49 plus 21 is close to 70 before calculating. | Pupils sort quadrilaterals according to their sides and angles.

B. A final unit task checks understanding of measurement concepts. | A pupil explains why 49 plus 21 is close to 70 before calculating.

C. Children use market price labels for a money comparison task. | A final unit task checks understanding of measurement concepts.

D. A pupil explains why 49 plus 21 is close to 70 before calculating. | A final unit task checks understanding of measurement concepts.

Correct answer / सही उत्तर: D. A pupil explains why 49 plus 21 is close to 70 before calculating. | A final unit task checks understanding of measurement concepts.

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships. Application: A pupil explains why 49 plus 21 is close to 70 before calculating. Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

MCQ 153 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Number sense / संख्या बोध / Mathematization / गणितीकरण)

A. Number sense / संख्या बोध → Flexible understanding of numbers, magnitudes and relationships.

B. Mathematization / गणितीकरण → Arranging mathematical tasks from accessible experiences toward greater complexity.

C. Number sense / संख्या बोध → Expressing or analysing real situations using mathematical ideas.

D. Task sequencing / कार्य क्रम → Applying mathematical understanding and processes in meaningful situations.

Correct answer / सही उत्तर: A. Number sense / संख्या बोध → Flexible understanding of numbers, magnitudes and relationships.

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships.
Application: A pupil explains why 49 plus 21 is close to 70 before calculating.

MCQ 154 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Number sense / संख्या बोध / Inductive reasoning / आगमनात्मक तर्क)

A. Inductive reasoning / आगमनात्मक तर्क→ Pupils measure and compare real classroom objects.

B. Number sense / संख्या बोध → Pupils notice that adding two even numbers gives even results and test more cases.

C. Performance task / प्रदर्शन कार्य → Children use market price labels for a money comparison task.

D. Number sense / संख्या बोध → A pupil explains why 49 plus 21 is close to 70 before calculating.

Correct answer / सही उत्तर: D. Number sense / संख्या बोध → A pupil explains why 49 plus 21 is close to 70 before calculating.

Explanation / व्याख्या

Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships. Application: A pupil explains why 49 plus 21 is close to 70 before calculating.

MCQ 155 • CORE PRACTICE · FORM 01

Identify the concept described: Using an ordered sequence of number names consistently when counting.

A. Data handling / आँकड़ा प्रबंधन

B. Counting principle / गणना सिद्धांत

C. Geometric reasoning / ज्यामितीय तर्क

D. Performance task / प्रदर्शन कार्य

Correct answer / सही उत्तर: B. Counting principle / गणना सिद्धांत

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

MCQ 156 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A child counts each object once in a stable order.

A. Mathematical pattern / गणितीय पैटर्न

B. Summative assessment / संकलनात्मक आकलन

C. Deductive reasoning / निगमनात्मक तर्क

D. Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: D. Counting principle / गणना सिद्धांत

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

MCQ 157 • CORE PRACTICE · FORM 03

Which explanation best defines Counting principle / गणना सिद्धांत?

A. Applying mathematical understanding and processes in meaningful situations.

B. Measuring using informal repeatable units.

C. Using an ordered sequence of number names consistently when counting.

D. Using precise terms and symbols to communicate mathematical meaning.

Correct answer / सही उत्तर: C. Using an ordered sequence of number names consistently when counting.

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

MCQ 158 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Counting principle / गणना सिद्धांत?

A. A pupil computes 19 plus 26 as 20 plus 25.

B. Children represent three apples and three stones with the same number 3.

C. A child counts each object once in a stable order.

D. A learner chooses an appropriate unit to measure a desk.

Correct answer / सही उत्तर: C. A child counts each object once in a stable order.

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

MCQ 159 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Using an ordered sequence of number names consistently when counting. (2) A structured resource whose activities can support mathematical understanding.

A. Unit planning / इकाई योजना | Mathematics textbook / गणित पाठ्यपुस्तक

B. Counting principle / गणना सिद्धांत | Mathematization / गणितीकरण

C. Mathematics textbook / गणित पाठ्यपुस्तक | Counting principle / गणना सिद्धांत

D. Counting principle / गणना सिद्धांत | Mathematics textbook / गणित पाठ्यपुस्तक

Correct answer / सही उत्तर: D. Counting principle / गणना सिद्धांत | Mathematics textbook / गणित पाठ्यपुस्तक

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order. Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 160 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A child counts each object once in a stable order. (2) Children use market price labels for a money comparison task.

A. Counting principle / गणना सिद्धांत | Geometric reasoning / ज्यामितीय तर्क

B. Local resources / स्थानीय संसाधन | Counting principle / गणना सिद्धांत

C. Mathematical rubric / गणितीय मानदंड तालिका | Local resources / स्थानीय संसाधन

D. Counting principle / गणना सिद्धांत | Local resources / स्थानीय संसाधन

Correct answer / सही उत्तर: D. Counting principle / गणना सिद्धांत | Local resources / स्थानीय संसाधन

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order. Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

GyanTech Guru Ji

MCQ 161 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Counting principle / गणना सिद्धांत and Abstraction / अमूर्तीकरण.

A. Representing common mathematical properties apart from particular objects. | Using an ordered sequence of number names consistently when counting.

B. Partitioning a quantity into groups of equal size. | Representing common mathematical properties apart from particular objects.

C. Using an ordered sequence of number names consistently when counting. | Representing common mathematical properties apart from particular objects.

D. Using an ordered sequence of number names consistently when counting. | An observable statement of expected mathematical learning.

Correct answer / सही उत्तर: C. Using an ordered sequence of number names consistently when counting. | Representing common mathematical properties apart from particular objects.

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order. Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3.

MCQ 162 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Counting principle / गणना सिद्धांत and Curriculum progression / पाठ्यचर्या प्रगति.

A. A pupil can compare two lengths using the same unit. | Counting and grouping experiences precede formal multiplication notation.

B. Counting and grouping experiences precede formal multiplication notation. | A child counts each object once in a stable order.

C. A child counts each object once in a stable order. | Counting and grouping experiences precede formal multiplication notation.

D. A child counts each object once in a stable order. | A pupil draws groups of circles to represent multiplication.

Correct answer / सही उत्तर: C. A child counts each object once in a stable order. | Counting and grouping experiences precede formal multiplication notation.

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order. Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 163 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Counting principle / गणना सिद्धांत / Deductive reasoning / निगमनात्मक तर्क)

A. Counting principle / गणना सिद्धांत → Drawing a conclusion that follows from accepted premises or rules.

B. Deductive reasoning / निगमनात्मक तर्क→ Expressing ideas through objects, pictures, symbols or language.

C. Counting principle / गणना सिद्धांत → Using an ordered sequence of number names consistently when counting.

D. Mathematical representation / गणितीय निरूपण → Finding a reasonable approximate quantity or result.

Correct answer / सही उत्तर: C. Counting principle / गणना सिद्धांत → Using an ordered sequence of number names consistently when counting.

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

MCQ 164 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Counting principle / गणना सिद्धांत / Concrete representation / मूर्त निरूपण)

A. Counting principle / गणना सिद्धांत → A child counts each object once in a stable order.

B. Spatial thinking / स्थानिक चिंतन → A teacher changes grouping after observing pupils' fraction strategies.

C. Counting principle / गणना सिद्धांत → A pupil uses counters to demonstrate addition.

D. Concrete representation / मूर्त निरूपण → A pupil predicts which shape fits after a rotation.

Correct answer / सही उत्तर: A. Counting principle / गणना सिद्धांत → A child counts each object once in a stable order.

Explanation / व्याख्या

Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

Short-answer revision

Recall the idea before reading the model answer.

REVISION 02.01

Explain One-to-one correspondence / एक-एक संगति and give one classroom example.

Model answer: Matching exactly one element of one collection to each element of another. A child gives one pencil to each pupil to check if there are enough.

REVISION 02.02

Explain Cardinality / गणन संख्या बोध and give one classroom example.

Model answer: Understanding that the last count word gives the total number of objects. After counting five shells, a child answers how many without counting again.

REVISION 02.03

Explain Seriation / क्रमबद्धता and give one classroom example.

Model answer: Arranging items in order by a measurable property. Children arrange sticks from shortest to longest.

REVISION 02.04

Explain Subitizing / त्वरित संख्या पहचान and give one classroom example.

Model answer: Recognising a small quantity without counting each item individually. A child immediately identifies three dots on a card.

GyanTech Guru Ji

REVISION 02.05

Explain Place value / स्थानीय मान and give one classroom example.

Model answer: The value a digit has because of its position in a numeral. The 4 in forty-two represents four tens.

REVISION 02.06

Explain Error analysis / त्रुटि विश्लेषण and give one classroom example.

Model answer: Examining learner mistakes to infer their underlying reasoning. A teacher asks why a child wrote 305 for thirty-five before planning support.

REVISION 02.07

Explain Conservation of number / संख्या संरक्षण and give one classroom example.

Model answer: Understanding that number remains unchanged when objects are rearranged without adding or removing any. A child recognises that spreading five counters does not create more counters.

GyanTech Guru Ji

REVISION 02.08

Explain Number sense / संख्या बोध and give one classroom example.

Model answer: Flexible understanding of numbers, magnitudes and relationships. A pupil explains why 49 plus 21 is close to 70 before calculating.

REVISION 02.09

Explain Counting principle / गणना सिद्धांत and give one classroom example.

Model answer: Using an ordered sequence of number names consistently when counting. A child counts each object once in a stable order.

GyanTech Guru Ji

CHAPTER 03 • 62 MCQs • 6 REVISION PROMPTS

Mathematical Communication

Important topics, examples, new classroom scenarios and core practice

Important topics & revision notes

Data handling / आँकड़ा प्रबंधन

Collecting, organising and interpreting information.

Classroom example: Children tally classmates' favourite fruits and compare frequencies.

Pictograph / चित्रालेख

Representing data with pictures or symbols and a key when needed.

Classroom example: Each apple icon in a chart stands for two votes.

Spatial thinking / स्थानिक चिंतन

Reasoning about shapes, positions and relationships in space.

Classroom example: A pupil predicts which shape fits after a rotation.

Mathematical representation / गणितीय निरूपण

Expressing ideas through objects, pictures, symbols or language.

Classroom example: A pupil draws equal groups to explain a multiplication expression.

Mathematical argument / गणितीय तर्क प्रस्तुति

Giving reasons to support a mathematical claim.

Classroom example: A child explains why two differently arranged shapes have equal area.

Mathematical discussion / गणितीय चर्चा

Sharing, comparing and justifying ways of solving a problem.

Classroom example: Pairs compare two methods for adding 37 and 28.

New classroom-based questions

Apply concepts to realistic teaching decisions.

MCQ 165 • NEW CLASSROOM APPLICATION

Which response best supports mathematical communication?

A. Ask the pupil to show and explain how the answer was obtained
B. Accept only the final numeral
C. Forbid drawings and gestures
D. Require the teacher's method verbatim

Correct answer / सही उत्तर: A. Ask the pupil to show and explain how the answer was obtained

Explanation / व्याख्या

Representations and explanations make reasoning visible.

MCQ 166 • NEW CLASSROOM APPLICATION

How can the fraction three-fourths be communicated?

A. Draw three unrelated shapes
B. Shade three unequal arbitrary regions and call them fourths
C. Shade three of four equal parts and write 3/4
D. Write 34 without explanation

Correct answer / सही उत्तर: C. Shade three of four equal parts and write 3/4

Explanation / व्याख्या

A fraction represents equal parts of a defined whole.

Core question bank

Ten related practice formats; core concepts recur for revision.

MCQ 167 • CORE PRACTICE · FORM 01

Identify the concept described: Collecting, organising and interpreting information.

A. Inductive reasoning / आगमनात्मक तर्क

B. Estimation / अनुमान

C. Task sequencing / कार्य क्रम

D. Data handling / आँकड़ा प्रबंधन

Correct answer / सही उत्तर: D. Data handling / आँकड़ा प्रबंधन

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

MCQ 168 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children tally classmates' favourite fruits and compare frequencies.

A. Data handling / आँकड़ा प्रबंधन

B. Equal sharing / समान बाँट

C. Local resources / स्थानीय संसाधन

D. Curriculum progression / पाठ्यचर्या प्रगति

Correct answer / सही उत्तर: A. Data handling / आँकड़ा प्रबंधन

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

MCQ 169 • CORE PRACTICE · FORM 03

Which explanation best defines Data handling / आँकड़ा प्रबंधन?

A. Collecting, organising and interpreting information.

B. A linear representation of ordered numerical positions.

C. Finding a reasonable approximate quantity or result.

D. Understanding that the last count word gives the total number of objects.

Correct answer / सही उत्तर: A. Collecting, organising and interpreting information.

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

MCQ 170 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Data handling / आँकड़ा प्रबंधन?

A. Pupils notice that adding two even numbers gives even results and test more cases.

B. Children tally classmates' favourite fruits and compare frequencies.

C. A child estimates the number of pencils in a jar before counting.

D. A pupil can compare two lengths using the same unit.

Correct answer / सही उत्तर: B. Children tally classmates' favourite fruits and compare frequencies.

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

GyanTech Guru Ji

MCQ 171 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Collecting, organising and interpreting information. (2) Showing mathematical relationships with drawings or diagrams.

A. Pictorial representation / चित्रात्मक निरूपण | Data handling / आँकड़ा प्रबंधन

B. Summative assessment / संकलनात्मक आकलन | Pictorial representation / चित्रात्मक निरूपण

C. Data handling / आँकड़ा प्रबंधन | Curriculum progression / पाठ्यचर्या प्रगति

D. Data handling / आँकड़ा प्रबंधन | Pictorial representation / चित्रात्मक निरूपण

Correct answer / सही उत्तर: D. Data handling / आँकड़ा प्रबंधन | Pictorial representation / चित्रात्मक निरूपण

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies. Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication.

MCQ 172 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children tally classmates' favourite fruits and compare frequencies. (2) A child counts each object once in a stable order.

A. Counting principle / गणना सिद्धांत | Data handling / आँकड़ा प्रबंधन

B. Data handling / आँकड़ा प्रबंधन | Counting principle / गणना सिद्धांत

C. Data handling / आँकड़ा प्रबंधन | Mathematical rubric / गणितीय मानदंड तालिका

D. Non-standard measurement / अमानक मापन | Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: B. Data handling / आँकड़ा प्रबंधन | Counting principle / गणना सिद्धांत

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies. Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

MCQ 173 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Data handling / आँकड़ा प्रबंधन and Learning outcome / अधिगम प्रतिफल.

A. An observable statement of expected mathematical learning. | Collecting, organising and interpreting information.

B. Collecting, organising and interpreting information. | An observable statement of expected mathematical learning.

C. Evaluating mathematics achievement after an instructional period. | An observable statement of expected mathematical learning.

D. Collecting, organising and interpreting information. | Expressing or analysing real situations using mathematical ideas.

Correct answer / सही उत्तर: B. Collecting, organising and interpreting information. | An observable statement of expected mathematical learning.

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies. Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning. Application: A pupil can compare two lengths using the same unit.

MCQ 174 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Data handling / आँकड़ा प्रबंधन and Mental mathematics / मानसिक गणना.

A. A teacher plans several connected lessons on measurement. | A pupil computes 19 plus 26 as 20 plus 25.

B. Children tally classmates' favourite fruits and compare frequencies. | A pupil computes 19 plus 26 as 20 plus 25.

C. A pupil computes 19 plus 26 as 20 plus 25. | Children tally classmates' favourite fruits and compare frequencies.

D. Children tally classmates' favourite fruits and compare frequencies. | A child recognises that spreading five counters does not create more counters.

Correct answer / सही उत्तर: B. Children tally classmates' favourite fruits and compare frequencies. | A pupil computes 19 plus 26 as 20 plus 25.

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies. Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

MCQ 175 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Data handling / आँकड़ा प्रबंधन / Subitizing / त्वरित संख्या पहचान)

A. Subitizing / त्वरित संख्या पहचान → A linear representation of ordered numerical positions.

B. Number line / संख्या रेखा → Sequencing related lessons to develop mathematical goals over time.

C. Data handling / आँकड़ा प्रबंधन → Collecting, organising and interpreting information.

D. Data handling / आँकड़ा प्रबंधन → Recognising a small quantity without counting each item individually.

Correct answer / सही उत्तर: C. Data handling / आँकड़ा प्रबंधन → Collecting, organising and interpreting information.

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

MCQ 176 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Data handling / आँकड़ा प्रबंधन / Equal sharing / समान बाँट)

A. Data handling / आँकड़ा प्रबंधन → Children share 12 counters among three groups.

B. Data handling / आँकड़ा प्रबंधन → Children tally classmates' favourite fruits and compare frequencies.

C. Place-value blocks / स्थानीय मान ब्लॉक → Children arrange sticks from shortest to longest.

D. Equal sharing / समान बाँट → A pupil exchanges ten unit cubes for a ten rod.

Correct answer / सही उत्तर: B. Data handling / आँकड़ा प्रबंधन → Children tally classmates' favourite fruits and compare frequencies.

Explanation / व्याख्या

Data handling / आँकड़ा प्रबंधन: Collecting, organising and interpreting information. Application: Children tally classmates' favourite fruits and compare frequencies.

MCQ 177 • CORE PRACTICE · FORM 01

Identify the concept described: Representing data with pictures or symbols and a key when needed.

A. Pictorial representation / चित्रात्मक निरूपण

B. Pictograph / चित्रालेख

C. Mathematical rubric / गणितीय मानदंड तालिका

D. Multiple strategies / अनेक रणनीतियाँ

Correct answer / सही उत्तर: B. Pictograph / चित्रालेख

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed.
Application: Each apple icon in a chart stands for two votes.

MCQ 178 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Each apple icon in a chart stands for two votes.

A. Concrete representation / मूर्त निरूपण

B. Pictograph / चित्रालेख

C. Pictorial representation / चित्रात्मक निरूपण

D. Mathematical rubric / गणितीय मानदंड तालिका

Correct answer / सही उत्तर: B. Pictograph / चित्रालेख

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed.
Application: Each apple icon in a chart stands for two votes.

MCQ 179 • CORE PRACTICE · FORM 03

Which explanation best defines Pictograph / चित्रालेख?

A. Understanding that number remains unchanged when objects are rearranged without adding or removing any.

B. Identifying and explaining spatial properties and relationships.

C. Representing data with pictures or symbols and a key when needed.

D. Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

Correct answer / सही उत्तर: C. Representing data with pictures or symbols and a key when needed.

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed.

Application: Each apple icon in a chart stands for two votes.

MCQ 180 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Pictograph / चित्रालेख?

A. The 4 in forty-two represents four tens.

B. A pupil records an equal-groups situation as 4 × 3 = 12.

C. Each apple icon in a chart stands for two votes.

D. Pupils use geoboards and pattern blocks to investigate shapes.

Correct answer / सही उत्तर: C. Each apple icon in a chart stands for two votes.

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed.

Application: Each apple icon in a chart stands for two votes.

MCQ 181 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Representing data with pictures or symbols and a key when needed. (2) Sequencing related lessons to develop mathematical goals over time.

A. Mathematization / गणितीकरण | Unit planning / इकाई योजना

B. Unit planning / इकाई योजना | Pictograph / चित्रालेख

C. Pictograph / चित्रालेख | Unit planning / इकाई योजना

D. Pictograph / चित्रालेख | Geometric reasoning / ज्यामितीय तर्क

Correct answer / सही उत्तर: C. Pictograph / चित्रालेख | Unit planning / इकाई योजना

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes. Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time. Application: A teacher plans several connected lessons on measurement.

MCQ 182 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Each apple icon in a chart stands for two votes. (2) A pupil computes 19 plus 26 as 20 plus 25.

A. Mathematical language / गणितीय भाषा | Mental mathematics / मानसिक गणना

B. Pictograph / चित्रालेख | Mental mathematics / मानसिक गणना

C. Pictograph / चित्रालेख | Seriation / क्रमबद्धता

D. Mental mathematics / मानसिक गणना | Pictograph / चित्रालेख

Correct answer / सही उत्तर: B. Pictograph / चित्रालेख | Mental mathematics / मानसिक गणना

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes. Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

MCQ 183 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Pictograph / चित्रालेख and Estimation / अनुमान.

A. Representing data with pictures or symbols and a key when needed. | Finding a reasonable approximate quantity or result.

B. Representing data with pictures or symbols and a key when needed. | Materials available in the community used for mathematical exploration.

C. Finding a reasonable approximate quantity or result. | Representing data with pictures or symbols and a key when needed.

D. A structured resource whose activities can support mathematical understanding. | Finding a reasonable approximate quantity or result.

Correct answer / सही उत्तर: A. Representing data with pictures or symbols and a key when needed. | Finding a reasonable approximate quantity or result.

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes. Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 184 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Pictograph / चित्रालेख and Multiple strategies / अनेक रणनीतियाँ.

A. Two pupils solve 18 + 7 by counting on and by making twenty. | Each apple icon in a chart stands for two votes.

B. Each apple icon in a chart stands for two votes. | Children arrange sticks from shortest to longest.

C. A teacher assesses explanation, strategy and accuracy separately. | Two pupils solve 18 + 7 by counting on and by making twenty.

D. Each apple icon in a chart stands for two votes. | Two pupils solve 18 + 7 by counting on and by making twenty.

Correct answer / सही उत्तर: D. Each apple icon in a chart stands for two votes. | Two pupils solve 18 + 7 by counting on and by making twenty.

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes. Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem. Application: Two pupils solve 18 + 7 by counting on and by making twenty.

MCQ 185 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Pictograph / चित्रालेख / Seriation / क्रमबद्धता)

A. Pictograph / चित्रालेख → Arranging items in order by a measurable property.

B. Unit planning / इकाई योजना → Using precise terms and symbols to communicate mathematical meaning.

C. Seriation / क्रमबद्धता → Sequencing related lessons to develop mathematical goals over time.

D. Pictograph / चित्रालेख → Representing data with pictures or symbols and a key when needed.

Correct answer / सही उत्तर: D. Pictograph / चित्रालेख → Representing data with pictures or symbols and a key when needed.

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed.
Application: Each apple icon in a chart stands for two votes.

MCQ 186 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Pictograph / चित्रालेख / Abstraction / अमूर्तीकरण)

A. Pictograph / चित्रालेख → Children represent three apples and three stones with the same number 3.

B. Pictograph / चित्रालेख → Each apple icon in a chart stands for two votes.

C. Non-standard measurement / अमानक मापन → Children use base-ten blocks to demonstrate regrouping.

D. Abstraction / अमूर्तीकरण → Children measure a desk using equal paper strips.

Correct answer / सही उत्तर: B. Pictograph / चित्रालेख → Each apple icon in a chart stands for two votes.

Explanation / व्याख्या

Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed.
Application: Each apple icon in a chart stands for two votes.

MCQ 187 • CORE PRACTICE · FORM 01

Identify the concept described: Reasoning about shapes, positions and relationships in space.

A. Spatial thinking / स्थानिक चिंतन

B. Mathematics laboratory / गणित प्रयोगशाला

C. Mental mathematics / मानसिक गणना

D. Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: A. Spatial thinking / स्थानिक चिंतन

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space.
Application: A pupil predicts which shape fits after a rotation.

MCQ 188 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil predicts which shape fits after a rotation.

A. Spatial thinking / स्थानिक चिंतन

B. Deductive reasoning / निगमनात्मक तर्क

C. Performance task / प्रदर्शन कार्य

D. Mathematical problem solving / गणितीय समस्या समाधान

Correct answer / सही उत्तर: A. Spatial thinking / स्थानिक चिंतन

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space.
Application: A pupil predicts which shape fits after a rotation.

MCQ 189 • CORE PRACTICE · FORM 03

Which explanation best defines Spatial thinking / स्थानिक चिंतन?

A. A regularity described by a relationship or rule.

B. Arranging mathematical tasks from accessible experiences toward greater complexity.

C. Reasoning about shapes, positions and relationships in space.

D. Sequencing related lessons to develop mathematical goals over time.

Correct answer / सही उत्तर: C. Reasoning about shapes, positions and relationships in space.

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space.
Application: A pupil predicts which shape fits after a rotation.

MCQ 190 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Spatial thinking / स्थानिक चिंतन?

A. A pupil predicts which shape fits after a rotation.

B. Two pupils solve 18 + 7 by counting on and by making twenty.

C. Children find different pairs of whole numbers whose sum is ten.

D. Children extend a repeating red-blue-blue sequence.

Correct answer / सही उत्तर: A. A pupil predicts which shape fits after a rotation.

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space. Application: A pupil predicts which shape fits after a rotation.

MCQ 191 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Reasoning about shapes, positions and relationships in space. (2) Measuring using informal repeatable units.

A. Spatial thinking / स्थानिक चिंतन | Non-standard measurement / अमानक मापन

B. Non-standard measurement / अमानक मापन | Spatial thinking / स्थानिक चिंतन

C. Spatial thinking / स्थानिक चिंतन | Deductive reasoning / निगमनात्मक तर्क

D. Seriation / क्रमबद्धता | Non-standard measurement / अमानक मापन

Correct answer / सही उत्तर: A. Spatial thinking / स्थानिक चिंतन | Non-standard measurement / अमानक मापन

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space. Application: A pupil predicts which shape fits after a rotation. Non-standard measurement / अमानक मापन: Measuring using informal repeatable units. Application: Children measure a desk using equal paper strips.

GyanTech Guru Ji

MCQ 192 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil predicts which shape fits after a rotation. (2) Pupils invent questions about quantities shown in a market picture.

A. Problem posing / समस्या निर्माण | Spatial thinking / स्थानिक चिंतन

B. One-to-one correspondence / एक-एक संगति | Problem posing / समस्या निर्माण

C. Spatial thinking / स्थानिक चिंतन | Summative assessment / संकलनात्मक आकलन

D. Spatial thinking / स्थानिक चिंतन | Problem posing / समस्या निर्माण

Correct answer / सही उत्तर: D. Spatial thinking / स्थानिक चिंतन | Problem posing / समस्या निर्माण

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space. Application: A pupil predicts which shape fits after a rotation. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

GyanTech Guru Ji

MCQ 193 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Spatial thinking / स्थानिक चिंतन and Mathematical pattern / गणितीय पैटर्न.

A. Reasoning about shapes, positions and relationships in space. | Measuring using informal repeatable units.

B. A regularity described by a relationship or rule. | Reasoning about shapes, positions and relationships in space.

C. Reasoning about shapes, positions and relationships in space. | A regularity described by a relationship or rule.

D. Showing mathematical relationships with drawings or diagrams. | A regularity described by a relationship or rule.

Correct answer / सही उत्तर: C. Reasoning about shapes, positions and relationships in space. | A regularity described by a relationship or rule.

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space. Application: A pupil predicts which shape fits after a rotation. Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence.

MCQ 194 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Spatial thinking / स्थानिक चिंतन and Mathematical competency / गणितीय दक्षता.

A. A pupil predicts which shape fits after a rotation. | A pupil exchanges ten unit cubes for a ten rod.

B. Pupils sort quadrilaterals according to their sides and angles. | A learner chooses an appropriate unit to measure a desk.

C. A learner chooses an appropriate unit to measure a desk. | A pupil predicts which shape fits after a rotation.

D. A pupil predicts which shape fits after a rotation. | A learner chooses an appropriate unit to measure a desk.

Correct answer / सही उत्तर: D. A pupil predicts which shape fits after a rotation. | A learner chooses an appropriate unit to measure a desk.

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space. Application: A pupil predicts which shape fits after a rotation. Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

MCQ 195 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Spatial thinking / स्थानिक चिंतन / Geometric reasoning / ज्यामितीय तर्क)

A. Spatial thinking / स्थानिक चिंतन → Reasoning about shapes, positions and relationships in space.

B. Spatial thinking / स्थानिक चिंतन → Identifying and explaining spatial properties and relationships.

C. Place-value blocks / स्थानीय मान ब्लॉक → A structured resource whose activities can support mathematical understanding.

D. Geometric reasoning / ज्यामितीय तर्क→ Materials representing units, tens and other base-ten groupings.

Correct answer / सही उत्तर: A. Spatial thinking / स्थानिक चिंतन → Reasoning about shapes, positions and relationships in space.

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space.
Application: A pupil predicts which shape fits after a rotation.

MCQ 196 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Spatial thinking / स्थानिक चिंतन / Place-value blocks / स्थानीय मान ब्लॉक)

A. Place-value blocks / स्थानीय मान ब्लॉक → Children extend a repeating red-blue-blue sequence.

B. Spatial thinking / स्थानिक चिंतन → A pupil exchanges ten unit cubes for a ten rod.

C. Mathematical pattern / गणितीय पैटर्न → Children represent a sharing situation using division.

D. Spatial thinking / स्थानिक चिंतन → A pupil predicts which shape fits after a rotation.

Correct answer / सही उत्तर: D. Spatial thinking / स्थानिक चिंतन → A pupil predicts which shape fits after a rotation.

Explanation / व्याख्या

Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space. Application: A pupil predicts which shape fits after a rotation.

MCQ 197 • CORE PRACTICE · FORM 01

Identify the concept described: Expressing ideas through objects, pictures, symbols or language.

A. Abstraction / अमूर्तीकरण

B. One-to-one correspondence / एक-एक संगति

C. Mathematical representation / गणितीय निरूपण

D. Pictorial representation / चित्रात्मक निरूपण

Correct answer / सही उत्तर: C. Mathematical representation / गणितीय निरूपण

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

MCQ 198 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil draws equal groups to explain a multiplication expression.

A. Mathematical representation / गणितीय निरूपण

B. Error analysis / त्रुटि विश्लेषण

C. Performance task / प्रदर्शन कार्य

D. Estimation / अनुमान

Correct answer / सही उत्तर: A. Mathematical representation / गणितीय निरूपण

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

MCQ 199 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematical representation / गणितीय निरूपण?

A. A space or organised set of resources for exploring mathematical ideas.

B. Materials available in the community used for mathematical exploration.

C. Expressing ideas through objects, pictures, symbols or language.

D. Partitioning a quantity into groups of equal size.

Correct answer / सही उत्तर: C. Expressing ideas through objects, pictures, symbols or language.

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

MCQ 200 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematical representation / गणितीय निरूपण?

A. A pupil writes 7 > 5 to express a comparison.

B. A pupil draws equal groups to explain a multiplication expression.

C. The 4 in forty-two represents four tens.

D. Children use market price labels for a money comparison task.

Correct answer / सही उत्तर: B. A pupil draws equal groups to explain a multiplication expression.

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

GyanTech Guru Ji

MCQ 201 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Expressing ideas through objects, pictures, symbols or language. (2) Using ongoing evidence to guide further mathematics learning.

A. Formative assessment / निर्माणात्मक आकलन | Mathematical representation / गणितीय निरूपण

B. Mathematical representation / गणितीय निरूपण | Symbolic representation / प्रतीकात्मक निरूपण

C. Manipulatives / मूर्त शिक्षण सामग्री | Formative assessment / निर्माणात्मक आकलन

D. Mathematical representation / गणितीय निरूपण | Formative assessment / निर्माणात्मक आकलन

Correct answer / सही उत्तर: D. Mathematical representation / गणितीय निरूपण | Formative assessment / निर्माणात्मक आकलन

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression. Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

MCQ 202 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil draws equal groups to explain a multiplication expression. (2) A child gives one pencil to each pupil to check if there are enough.

A. One-to-one correspondence / एक-एक संगति | Mathematical representation / गणितीय निरूपण

B. Mathematical representation / गणितीय निरूपण | Problem posing / समस्या निर्माण

C. Mathematics laboratory / गणित प्रयोगशाला | One-to-one correspondence / एक-एक संगति

D. Mathematical representation / गणितीय निरूपण | One-to-one correspondence / एक-एक संगति

Correct answer / सही उत्तर: D. Mathematical representation / गणितीय निरूपण | One-to-one correspondence / एक-एक संगति

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression. One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough.

MCQ 203 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematical representation / गणितीय निरूपण and Number sense / संख्या बोध.

A. Using ongoing evidence to guide further mathematics learning. | Flexible understanding of numbers, magnitudes and relationships.

B. Flexible understanding of numbers, magnitudes and relationships. | Expressing ideas through objects, pictures, symbols or language.

C. Expressing ideas through objects, pictures, symbols or language. | A space or organised set of resources for exploring mathematical ideas.

D. Expressing ideas through objects, pictures, symbols or language. | Flexible understanding of numbers, magnitudes and relationships.

Correct answer / सही उत्तर: D. Expressing ideas through objects, pictures, symbols or language. | Flexible understanding of numbers, magnitudes and relationships.

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression. Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships. Application: A pupil explains why 49 plus 21 is close to 70 before calculating.

MCQ 204 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematical representation / गणितीय निरूपण and Mathematical language / गणितीय भाषा.

A. A final unit task checks understanding of measurement concepts. | A pupil writes 7 > 5 to express a comparison.

B. A pupil draws equal groups to explain a multiplication expression. | A child gives one pencil to each pupil to check if there are enough.

C. A pupil writes 7 > 5 to express a comparison. | A pupil draws equal groups to explain a multiplication expression.

D. A pupil draws equal groups to explain a multiplication expression. | A pupil writes 7 > 5 to express a comparison.

Correct answer / सही उत्तर: D. A pupil draws equal groups to explain a multiplication expression. | A pupil writes 7 > 5 to express a comparison.

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression. Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

MCQ 205 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematical representation / गणितीय निरूपण / Inductive reasoning / आगमनात्मक तर्क)

A. Inductive reasoning / आगमनात्मक तर्क→ Expressing relationships using mathematical symbols.

B. Symbolic representation / प्रतीकात्मक निरूपण → Materials representing units, tens and other base-ten groupings.

C. Mathematical representation / गणितीय निरूपण → Forming a tentative generalisation from observed cases.

D. Mathematical representation / गणितीय निरूपण → Expressing ideas through objects, pictures, symbols or language.

Correct answer / सही उत्तर: D. Mathematical representation / गणितीय निरूपण → Expressing ideas through objects, pictures, symbols or language.

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

MCQ 206 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematical representation / गणितीय निरूपण / One-to-one correspondence / एक-एक संगति)

A. Mathematical representation / गणितीय निरूपण → A child gives one pencil to each pupil to check if there are enough.

B. One-to-one correspondence / एक-एक संगति → A pupil computes 19 plus 26 as 20 plus 25.

C. Mental mathematics / मानसिक गणना → A pupil records an equal-groups situation as 4 × 3 = 12.

D. Mathematical representation / गणितीय निरूपण → A pupil draws equal groups to explain a multiplication expression.

Correct answer / सही उत्तर: D. Mathematical representation / गणितीय निरूपण → A pupil draws equal groups to explain a multiplication expression.

Explanation / व्याख्या

Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

MCQ 207 • CORE PRACTICE · FORM 01

Identify the concept described: Giving reasons to support a mathematical claim.

A. Deductive reasoning / निगमनात्मक तर्क

B. Curriculum progression / पाठ्यचर्या प्रगति

C. Mathematical argument / गणितीय तर्क प्रस्तुति

D. Summative assessment / संकलनात्मक आकलन

Correct answer / सही उत्तर: C. Mathematical argument / गणितीय तर्क प्रस्तुति

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area.

MCQ 208 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A child explains why two differently arranged shapes have equal area.

A. Mathematics textbook / गणित पाठ्यपुस्तक

B. One-to-one correspondence / एक-एक संगति

C. Mathematical argument / गणितीय तर्क प्रस्तुति

D. Unit planning / इकाई योजना

Correct answer / सही उत्तर: C. Mathematical argument / गणितीय तर्क प्रस्तुति

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim.
Application: A child explains why two differently arranged shapes have equal area.

MCQ 209 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematical argument / गणितीय तर्क प्रस्तुति?

A. Giving reasons to support a mathematical claim.

B. Showing mathematical relationships with actual objects.

C. Expressing or analysing real situations using mathematical ideas.

D. Materials available in the community used for mathematical exploration.

Correct answer / सही उत्तर: A. Giving reasons to support a mathematical claim.

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim.
Application: A child explains why two differently arranged shapes have equal area.

MCQ 210 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematical argument / गणितीय तर्क प्रस्तुति?

A. A teacher asks why a child wrote 305 for thirty-five before planning support.

B. A teacher plans several connected lessons on measurement.

C. Counting and grouping experiences precede formal multiplication notation.

D. A child explains why two differently arranged shapes have equal area.

Correct answer / सही उत्तर: D. A child explains why two differently arranged shapes have equal area.

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area.

MCQ 211 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Giving reasons to support a mathematical claim. (2) Materials available in the community used for mathematical exploration.

A. Mathematical argument / गणितीय तर्क प्रस्तुति | Geometric reasoning / ज्यामितीय तर्क

B. Mathematical argument / गणितीय तर्क प्रस्तुति | Local resources / स्थानीय संसाधन

C. Non-standard measurement / अमानक मापन | Local resources / स्थानीय संसाधन

D. Local resources / स्थानीय संसाधन | Mathematical argument / गणितीय तर्क प्रस्तुति

Correct answer / सही उत्तर: B. Mathematical argument / गणितीय तर्क प्रस्तुति | Local resources / स्थानीय संसाधन

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area. Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

MCQ 212 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A child explains why two differently arranged shapes have equal area. (2) A lesson moves from equal groups to drawings and multiplication notation.

A. Mathematical argument / गणितीय तर्क प्रस्तुति | Task sequencing / कार्य क्रम

B. Mathematical argument / गणितीय तर्क प्रस्तुति | Seriation / क्रमबद्धता

C. Formative assessment / निर्माणात्मक आकलन | Task sequencing / कार्य क्रम

D. Task sequencing / कार्य क्रम | Mathematical argument / गणितीय तर्क प्रस्तुति

Correct answer / सही उत्तर: A. Mathematical argument / गणितीय तर्क प्रस्तुति | Task sequencing / कार्य क्रम

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area. Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 213 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematical argument / गणितीय तर्क प्रस्तुति and Curriculum progression / पाठ्यचर्या प्रगति.

A. Giving reasons to support a mathematical claim. | Organising mathematical ideas in a coherent developmental sequence.

B. Materials representing units, tens and other base-ten groupings. | Organising mathematical ideas in a coherent developmental sequence.

C. Organising mathematical ideas in a coherent developmental sequence. | Giving reasons to support a mathematical claim.

D. Giving reasons to support a mathematical claim. | Arranging items in order by a measurable property.

Correct answer / सही उत्तर: A. Giving reasons to support a mathematical claim. | Organising mathematical ideas in a coherent developmental sequence.

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area. Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 214 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematical argument / गणितीय तर्क प्रस्तुति and Equal sharing / समान बाँट.

A. A child explains why two differently arranged shapes have equal area. | Children extend a repeating red-blue-blue sequence.

B. A child explains why two differently arranged shapes have equal area. | Children share 12 counters among three groups.

C. Children share 12 counters among three groups. | A child explains why two differently arranged shapes have equal area.

D. A teacher plans several connected lessons on measurement. | Children share 12 counters among three groups.

Correct answer / सही उत्तर: B. A child explains why two differently arranged shapes have equal area. | Children share 12 counters among three groups.

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area. Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups.

MCQ 215 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematical argument / गणितीय तर्क प्रस्तुति / Curriculum progression / पाठ्यचर्या प्रगति)

A. Geometric reasoning / ज्यामितीय तर्क→ Understanding that the last count word gives the total number of objects.

B. Curriculum progression / पाठ्यचर्या प्रगति → Identifying and explaining spatial properties and relationships.

C. Mathematical argument / गणितीय तर्क प्रस्तुति → Organising mathematical ideas in a coherent developmental sequence.

D. Mathematical argument / गणितीय तर्क प्रस्तुति → Giving reasons to support a mathematical claim.

Correct answer / सही उत्तर: D. Mathematical argument / गणितीय तर्क प्रस्तुति → Giving reasons to support a mathematical claim.

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim.
Application: A child explains why two differently arranged shapes have equal area.

MCQ 216 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematical argument / गणितीय तर्क प्रस्तुति / Number sense / संख्या बोध)

A. Curriculum progression / पाठ्यचर्या प्रगति → A pupil can compare two lengths using the same unit.

B. Number sense / संख्या बोध → Counting and grouping experiences precede formal multiplication notation.

C. Mathematical argument / गणितीय तर्क प्रस्तुति → A child explains why two differently arranged shapes have equal area.

D. Mathematical argument / गणितीय तर्क प्रस्तुति → A pupil explains why 49 plus 21 is close to 70 before calculating.

Correct answer / सही उत्तर: C. Mathematical argument / गणितीय तर्क प्रस्तुति → A child explains why two differently arranged shapes have equal area.

Explanation / व्याख्या

Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area.

MCQ 217 • CORE PRACTICE · FORM 01

Identify the concept described: Sharing, comparing and justifying ways of solving a problem.

A. Abstraction / अमूर्तीकरण

B. Local resources / स्थानीय संसाधन

C. Mathematical discussion / गणितीय चर्चा

D. Inductive reasoning / आगमनात्मक तर्क

Correct answer / सही उत्तर: C. Mathematical discussion / गणितीय चर्चा

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 218 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Pairs compare two methods for adding 37 and 28.

A. Performance task / प्रदर्शन कार्य

B. Mathematical discussion / गणितीय चर्चा

C. Cardinality / गणन संख्या बोध

D. Pictorial representation / चित्रात्मक निरूपण

Correct answer / सही उत्तर: B. Mathematical discussion / गणितीय चर्चा

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 219 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematical discussion / गणितीय चर्चा?

A. Materials available in the community used for mathematical exploration.

B. Sharing, comparing and justifying ways of solving a problem.

C. A task allowing multiple valid solutions or approaches.

D. Arranging items in order by a measurable property.

Correct answer / सही उत्तर: B. Sharing, comparing and justifying ways of solving a problem.

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 220 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematical discussion / गणितीय चर्चा?

A. Pairs compare two methods for adding 37 and 28.

B. Children share 12 counters among three groups.

C. Children arrange sticks from shortest to longest.

D. A final unit task checks understanding of measurement concepts.

Correct answer / सही उत्तर: A. Pairs compare two methods for adding 37 and 28.

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 221 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Sharing, comparing and justifying ways of solving a problem. (2) Matching exactly one element of one collection to each element of another.

A. Equal sharing / समान बाँट | One-to-one correspondence / एक-एक संगति

B. Mathematical discussion / गणितीय चर्चा | Mental mathematics / मानसिक गणना

C. One-to-one correspondence / एक-एक संगति | Mathematical discussion / गणितीय चर्चा

D. Mathematical discussion / गणितीय चर्चा | One-to-one correspondence / एक-एक संगति

Correct answer / सही उत्तर: D. Mathematical discussion / गणितीय चर्चा | One-to-one correspondence / एक-एक संगति

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28. One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough.

GyanTech Guru Ji

MCQ 222 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Pairs compare two methods for adding 37 and 28. (2) A pupil records an equal-groups situation as 4 × 3 = 12.

A. Mathematical discussion / गणितीय चर्चा | Unit planning / इकाई योजना

B. Mathematical discussion / गणितीय चर्चा | Symbolic representation / प्रतीकात्मक निरूपण

C. Symbolic representation / प्रतीकात्मक निरूपण | Mathematical discussion / गणितीय चर्चा

D. Formative assessment / निर्माणात्मक आकलन | Symbolic representation / प्रतीकात्मक निरूपण

Correct answer / सही उत्तर: B. Mathematical discussion / गणितीय चर्चा | Symbolic representation / प्रतीकात्मक निरूपण

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28. Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12.

MCQ 223 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematical discussion / गणितीय चर्चा and Curriculum progression / पाठ्यचर्या प्रगति.

A. Creating meaningful mathematical questions from a situation. | Organising mathematical ideas in a coherent developmental sequence.

B. Organising mathematical ideas in a coherent developmental sequence. | Sharing, comparing and justifying ways of solving a problem.

C. Sharing, comparing and justifying ways of solving a problem. | Evaluating mathematics achievement after an instructional period.

D. Sharing, comparing and justifying ways of solving a problem. | Organising mathematical ideas in a coherent developmental sequence.

Correct answer / सही उत्तर: D. Sharing, comparing and justifying ways of solving a problem. | Organising mathematical ideas in a coherent developmental sequence.

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28. Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 224 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematical discussion / गणितीय चर्चा and Curriculum progression / पाठ्यचर्या प्रगति.

A. Pairs compare two methods for adding 37 and 28. | Two pupils solve 18 + 7 by counting on and by making twenty.

B. Counting and grouping experiences precede formal multiplication notation. | Pairs compare two methods for adding 37 and 28.

C. A pupil can compare two lengths using the same unit. | Counting and grouping experiences precede formal multiplication notation.

D. Pairs compare two methods for adding 37 and 28. | Counting and grouping experiences precede formal multiplication notation.

Correct answer / सही उत्तर: D. Pairs compare two methods for adding 37 and 28. | Counting and grouping experiences precede formal multiplication notation.

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28. Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 225 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematical discussion / गणितीय चर्चा / Number line / संख्या रेखा)

A. Mathematical discussion / गणितीय चर्चा → A linear representation of ordered numerical positions.

B. Mathematical discussion / गणितीय चर्चा → Sharing, comparing and justifying ways of solving a problem.

C. Equal sharing / समान बाँट → Descriptive information about strengths and next steps in learning.

D. Number line / संख्या रेखा → Partitioning a quantity into groups of equal size.

Correct answer / सही उत्तर: B. Mathematical discussion / गणितीय चर्चा → Sharing, comparing and justifying ways of solving a problem.

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 226 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematical discussion / गणितीय चर्चा / Number line / संख्या रेखा)

A. Number line / संख्या रेखा → A pupil can compare two lengths using the same unit.

B. Mathematical discussion / गणितीय चर्चा → Pairs compare two methods for adding 37 and 28.

C. Mathematical discussion / गणितीय चर्चा → A child shows 8 minus 3 by moving left three steps.

D. Learning outcome / अधिगम प्रतिफल → A teacher asks how a child obtained 402 when adding 23 and 19.

Correct answer / सही उत्तर: B. Mathematical discussion / गणितीय चर्चा → Pairs compare two methods for adding 37 and 28.

Explanation / व्याख्या

Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

Short-answer revision

Recall the idea before reading the model answer.

REVISION 03.01

Explain Data handling / आँकड़ा प्रबंधन and give one classroom example.

Model answer: Collecting, organising and interpreting information. Children tally classmates' favourite fruits and compare frequencies.

REVISION 03.02

Explain Pictograph / चित्रालेख and give one classroom example.

Model answer: Representing data with pictures or symbols and a key when needed. Each apple icon in a chart stands for two votes.

REVISION 03.03

Explain Spatial thinking / स्थानिक चिंतन and give one classroom example.

Model answer: Reasoning about shapes, positions and relationships in space. A pupil predicts which shape fits after a rotation.

REVISION 03.04

Explain Mathematical representation / गणितीय निरूपण and give one classroom example.

Model answer: Expressing ideas through objects, pictures, symbols or language. A pupil draws equal groups to explain a multiplication expression.

GyanTech Guru Ji

REVISION 03.05

Explain Mathematical argument / गणितीय तर्क प्रस्तुति and give one classroom example.

Model answer: Giving reasons to support a mathematical claim. A child explains why two differently arranged shapes have equal area.

REVISION 03.06

Explain Mathematical discussion / गणितीय चर्चा and give one classroom example.

Model answer: Sharing, comparing and justifying ways of solving a problem. Pairs compare two methods for adding 37 and 28.

GyanTech Guru Ji

CHAPTER 04 • 102 MCQs • 10 REVISION PROMPTS

Teaching Learning in Mathematics

Important topics, examples, new classroom scenarios and core practice

Important topics & revision notes

Manipulatives / मूर्त शिक्षण सामग्री

Physical objects learners handle to explore mathematical ideas.

Classroom example: Children use base-ten blocks to demonstrate regrouping.

Concrete representation / मूर्त निरूपण

Showing mathematical relationships with actual objects.

Classroom example: A pupil uses counters to demonstrate addition.

Pictorial representation / चित्रात्मक निरूपण

Showing mathematical relationships with drawings or diagrams.

Classroom example: A pupil draws groups of circles to represent multiplication.

Symbolic representation / प्रतीकात्मक निरूपण

Expressing relationships using mathematical symbols.

Classroom example: A pupil records an equal-groups situation as 4 × 3 = 12.

Multiple strategies / अनेक रणनीतियाँ

Allowing different valid methods for solving a problem.

Classroom example: Two pupils solve 18 + 7 by counting on and by making twenty.

Estimation / अनुमान

Finding a reasonable approximate quantity or result.

Classroom example: A child estimates the number of pencils in a jar before counting.

Mental mathematics / मानसिक गणना

Using flexible number relationships without written standard algorithms.

Classroom example: A pupil computes 19 plus 26 as 20 plus 25.

Non-standard measurement / अमानक मापन

Measuring using informal repeatable units.

Classroom example: Children measure a desk using equal paper strips.

Geometric reasoning / ज्यामितीय तर्क

Identifying and explaining spatial properties and relationships.

Classroom example: Pupils sort quadrilaterals according to their sides and angles.

Equal sharing / समान बाँट

Partitioning a quantity into groups of equal size.

Classroom example: Children share 12 counters among three groups.

New classroom-based questions

Apply concepts to realistic teaching decisions.

MCQ 227 • NEW CLASSROOM APPLICATION

A pupil calculates 42 minus 17 as 35 by subtracting smaller digits from larger digits. What is the next teaching step?

A. Use place-value regrouping with concrete objects

B. Teach multiplication instead

C. Mark it wrong and move on

D. Give more problems without discussion

Correct answer / सही उत्तर: A. Use place-value regrouping with concrete objects

Explanation / व्याख्या

The error reveals a misunderstanding of regrouping in subtraction.

MCQ 228 • NEW CLASSROOM APPLICATION

Which task invites multiple strategies?

A. Copy the teacher's one solution only

B. Trace a numeral twenty times

C. Recite an answer without explanation

D. Find different ways to make a total of 24 using groups

Correct answer / सही उत्तर: D. Find different ways to make a total of 24 using groups

Explanation / व्याख्या

Open tasks support reasoning and comparison of strategies.

Core question bank

Ten related practice formats; core concepts recur for revision.

MCQ 229 • CORE PRACTICE · FORM 01

Identify the concept described: Physical objects learners handle to explore mathematical ideas.

A. Local resources / स्थानीय संसाधन

B. Seriation / क्रमबद्धता

C. Performance task / प्रदर्शन कार्य

D. Manipulatives / मूर्त शिक्षण सामग्री

Correct answer / सही उत्तर: D. Manipulatives / मूर्त शिक्षण सामग्री

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas.
Application: Children use base-ten blocks to demonstrate regrouping.

MCQ 230 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children use base-ten blocks to demonstrate regrouping.

A. Diagnostic assessment / निदानात्मक आकलन

B. Unit planning / इकाई योजना

C. Mathematical discussion / गणितीय चर्चा

D. Manipulatives / मूर्त शिक्षण सामग्री

Correct answer / सही उत्तर: D. Manipulatives / मूर्त शिक्षण सामग्री

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas.
Application: Children use base-ten blocks to demonstrate regrouping.

MCQ 231 • CORE PRACTICE · FORM 03

Which explanation best defines Manipulatives / मूर्त शिक्षण सामग्री?

A. Physical objects learners handle to explore mathematical ideas.
B. Matching exactly one element of one collection to each element of another.
C. Drawing a conclusion that follows from accepted premises or rules.
D. Expressing ideas through objects, pictures, symbols or language.

Correct answer / सही उत्तर: A. Physical objects learners handle to explore mathematical ideas.

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas.
Application: Children use base-ten blocks to demonstrate regrouping.

MCQ 232 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Manipulatives / मूर्त शिक्षण सामग्री?

A. A teacher changes grouping after observing pupils' fraction strategies.
B. Pupils use geoboards and pattern blocks to investigate shapes.
C. Children use base-ten blocks to demonstrate regrouping.
D. A final unit task checks understanding of measurement concepts.

Correct answer / सही उत्तर: C. Children use base-ten blocks to demonstrate regrouping.

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas.
Application: Children use base-ten blocks to demonstrate regrouping.

GyanTech Guru Ji

MCQ 233 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Physical objects learners handle to explore mathematical ideas. (2) Criteria describing quality of mathematical reasoning and representation.

A. Manipulatives / मूर्त शिक्षण सामग्री | Inductive reasoning / आगमनात्मक तर्क

B. Manipulatives / मूर्त शिक्षण सामग्री | Mathematical rubric / गणितीय मानदंड तालिका

C. Problem posing / समस्या निर्माण | Mathematical rubric / गणितीय मानदंड तालिका

D. Mathematical rubric / गणितीय मानदंड तालिका | Manipulatives / मूर्त शिक्षण सामग्री

Correct answer / सही उत्तर: B. Manipulatives / मूर्त शिक्षण सामग्री | Mathematical rubric / गणितीय मानदंड तालिका

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas. Application: Children use base-ten blocks to demonstrate regrouping. Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

GyanTech

MCQ 234 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children use base-ten blocks to demonstrate regrouping. (2) Children find different pairs of whole numbers whose sum is ten.

A. Manipulatives / मूर्त शिक्षण सामग्री | Open-ended task / मुक्त उत्तर कार्य

B. Spatial thinking / स्थानिक चिंतन | Open-ended task / मुक्त उत्तर कार्य

C. Open-ended task / मुक्त उत्तर कार्य | Manipulatives / मूर्त शिक्षण सामग्री

D. Manipulatives / मूर्त शिक्षण सामग्री | Inductive reasoning / आगमनात्मक तर्क

Correct answer / सही उत्तर: A. Manipulatives / मूर्त शिक्षण सामग्री | Open-ended task / मुक्त उत्तर कार्य

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas. Application: Children use base-ten blocks to demonstrate regrouping. Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches. Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 235 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Manipulatives / मूर्त शिक्षण सामग्री and Mathematical pattern / गणितीय पैटर्न.

A. A regularity described by a relationship or rule. | Physical objects learners handle to explore mathematical ideas.

B. Organising mathematical ideas in a coherent developmental sequence. | A regularity described by a relationship or rule.

C. Physical objects learners handle to explore mathematical ideas. | A regularity described by a relationship or rule.

D. Physical objects learners handle to explore mathematical ideas. | A task requiring demonstration of mathematical knowledge in action.

Correct answer / सही उत्तर: C. Physical objects learners handle to explore mathematical ideas. | A regularity described by a relationship or rule.

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas. Application: Children use base-ten blocks to demonstrate regrouping. Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence.

MCQ 236 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Manipulatives / मूर्त शिक्षण सामग्री and Place value / स्थानीय मान.

A. The 4 in forty-two represents four tens. | Children use base-ten blocks to demonstrate regrouping.

B. Children use base-ten blocks to demonstrate regrouping. | The 4 in forty-two represents four tens.

C. Children use market price labels for a money comparison task. | The 4 in forty-two represents four tens.

D. Children use base-ten blocks to demonstrate regrouping. | A teacher changes grouping after observing pupils' fraction strategies.

Correct answer / सही उत्तर: B. Children use base-ten blocks to demonstrate regrouping. | The 4 in forty-two represents four tens.

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas. Application: Children use base-ten blocks to demonstrate regrouping. Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens.

MCQ 237 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Manipulatives / मूर्त शिक्षण सामग्री / Diagnostic assessment / निदानात्मक आकलन)

A. Diagnostic assessment / निदानात्मक आकलन → Arranging items in order by a measurable property.

B. Seriation / क्रमबद्धता → Expressing or analysing real situations using mathematical ideas.

C. Manipulatives / मूर्त शिक्षण सामग्री → Physical objects learners handle to explore mathematical ideas.

D. Manipulatives / मूर्त शिक्षण सामग्री → Investigating particular errors or gaps in mathematical understanding.

Correct answer / सही उत्तर: C. Manipulatives / मूर्त शिक्षण सामग्री → Physical objects learners handle to explore mathematical ideas.

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas.
Application: Children use base-ten blocks to demonstrate regrouping.

MCQ 238 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Manipulatives / मूर्त शिक्षण सामग्री / Place-value blocks / स्थानीय मान ब्लॉक)

A. Place-value blocks / स्थानीय मान ब्लॉक → A teacher asks how a child obtained 402 when adding 23 and 19.

B. Manipulatives / मूर्त शिक्षण सामग्री → A pupil exchanges ten unit cubes for a ten rod.

C. Manipulatives / मूर्त शिक्षण सामग्री → Children use base-ten blocks to demonstrate regrouping.

D. Diagnostic assessment / निदानात्मक आकलन → Children tally classmates' favourite fruits and compare frequencies.

Correct answer / सही उत्तर: C. Manipulatives / मूर्त शिक्षण सामग्री → Children use base-ten blocks to demonstrate regrouping.

Explanation / व्याख्या

Manipulatives / मूर्त शिक्षण सामग्री: Physical objects learners handle to explore mathematical ideas.
Application: Children use base-ten blocks to demonstrate regrouping.

MCQ 239 • CORE PRACTICE · FORM 01

Identify the concept described: Showing mathematical relationships with actual objects.

A. Data handling / आँकड़ा प्रबंधन

B. One-to-one correspondence / एक-एक संगति

C. Open-ended task / मुक्त उत्तर कार्य

D. Concrete representation / मूर्त निरूपण

Correct answer / सही उत्तर: D. Concrete representation / मूर्त निरूपण

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects.
Application: A pupil uses counters to demonstrate addition.

MCQ 240 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil uses counters to demonstrate addition.

A. Concrete representation / मूर्त निरूपण

B. Mathematical competency / गणितीय दक्षता

C. Abstraction / अमूर्तीकरण

D. Mathematical problem solving / गणितीय समस्या समाधान

Correct answer / सही उत्तर: A. Concrete representation / मूर्त निरूपण

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects.
Application: A pupil uses counters to demonstrate addition.

MCQ 241 • CORE PRACTICE · FORM 03

Which explanation best defines Concrete representation / मूर्त निरूपण?

A. Recognising a small quantity without counting each item individually.

B. Applying mathematical understanding and processes in meaningful situations.

C. Creating meaningful mathematical questions from a situation.

D. Showing mathematical relationships with actual objects.

Correct answer / सही उत्तर: D. Showing mathematical relationships with actual objects.

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects.
Application: A pupil uses counters to demonstrate addition.

MCQ 242 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Concrete representation / मूर्त निरूपण?

A. The teacher explains how to improve the alignment of tens and ones.

B. Children arrange sticks from shortest to longest.

C. Counting and grouping experiences precede formal multiplication notation.

D. A pupil uses counters to demonstrate addition.

Correct answer / सही उत्तर: D. A pupil uses counters to demonstrate addition.

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects. Application: A pupil uses counters to demonstrate addition.

MCQ 243 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Showing mathematical relationships with actual objects. (2) Organising mathematical ideas in a coherent developmental sequence.

A. Concrete representation / मूर्त निरूपण | Local resources / स्थानीय संसाधन

B. Problem posing / समस्या निर्माण | Curriculum progression / पाठ्यचर्या प्रगति

C. Concrete representation / मूर्त निरूपण | Curriculum progression / पाठ्यचर्या प्रगति

D. Curriculum progression / पाठ्यचर्या प्रगति | Concrete representation / मूर्त निरूपण

Correct answer / सही उत्तर: C. Concrete representation / मूर्त निरूपण | Curriculum progression / पाठ्यचर्या प्रगति

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects. Application: A pupil uses counters to demonstrate addition. Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

GyanTech Guru Ji

MCQ 244 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil uses counters to demonstrate addition. (2) Each apple icon in a chart stands for two votes.

A. Concrete representation / मूर्त निरूपण | Pictograph / चित्रालेख

B. Pictograph / चित्रालेख | Concrete representation / मूर्त निरूपण

C. Summative assessment / संकलनात्मक आकलन | Pictograph / चित्रालेख

D. Concrete representation / मूर्त निरूपण | Performance task / प्रदर्शन कार्य

Correct answer / सही उत्तर: A. Concrete representation / मूर्त निरूपण | Pictograph / चित्रालेख

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects. Application: A pupil uses counters to demonstrate addition. Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes.

GyanTech Guru Ji

MCQ 245 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Concrete representation / मूर्त निरूपण and Diagnostic assessment / निदानात्मक आकलन.

A. Showing mathematical relationships with actual objects. | Matching exactly one element of one collection to each element of another.

B. Drawing a conclusion that follows from accepted premises or rules. | Investigating particular errors or gaps in mathematical understanding.

C. Investigating particular errors or gaps in mathematical understanding. | Showing mathematical relationships with actual objects.

D. Showing mathematical relationships with actual objects. | Investigating particular errors or gaps in mathematical understanding.

Correct answer / सही उत्तर: D. Showing mathematical relationships with actual objects. | Investigating particular errors or gaps in mathematical understanding.

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects. Application: A pupil uses counters to demonstrate addition. Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

MCQ 246 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Concrete representation / मूर्त निरूपण and Problem posing / समस्या निर्माण.

A. A pupil uses counters to demonstrate addition. | Pupils invent questions about quantities shown in a market picture.

B. A pupil uses counters to demonstrate addition. | Children use market price labels for a money comparison task.

C. Pupils invent questions about quantities shown in a market picture. | A pupil uses counters to demonstrate addition.

D. After counting five shells, a child answers how many without counting again. | Pupils invent questions about quantities shown in a market picture.

Correct answer / सही उत्तर: A. A pupil uses counters to demonstrate addition. | Pupils invent questions about quantities shown in a market picture.

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects. Application: A pupil uses counters to demonstrate addition. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

MCQ 247 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Concrete representation / मूर्त निरूपण / Mathematical discussion / गणितीय चर्चा)

A. Concrete representation / मूर्त निरूपण → Sharing, comparing and justifying ways of solving a problem.

B. Mathematical discussion / गणितीय चर्चा → Using ongoing evidence to guide further mathematics learning.

C. Formative assessment / निर्माणात्मक आकलन → Drawing a conclusion that follows from accepted premises or rules.

D. Concrete representation / मूर्त निरूपण → Showing mathematical relationships with actual objects.

Correct answer / सही उत्तर: D. Concrete representation / मूर्त निरूपण → Showing mathematical relationships with actual objects.

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects. Application: A pupil uses counters to demonstrate addition.

MCQ 248 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Concrete representation / मूर्त निरूपण / Formative assessment / निर्माणात्मक आकलन)

A. Concrete representation / मूर्त निरूपण → A pupil uses counters to demonstrate addition.

B. Concrete representation / मूर्त निरूपण → A teacher changes grouping after observing pupils' fraction strategies.

C. Formative assessment / निर्माणात्मक आकलन → A lesson moves from equal groups to drawings and multiplication notation.

D. Task sequencing / कार्य क्रम → A pupil draws equal groups to explain a multiplication expression.

Correct answer / सही उत्तर: A. Concrete representation / मूर्त निरूपण → A pupil uses counters to demonstrate addition.

Explanation / व्याख्या

Concrete representation / मूर्त निरूपण: Showing mathematical relationships with actual objects. Application: A pupil uses counters to demonstrate addition.

MCQ 249 • CORE PRACTICE · FORM 01

Identify the concept described: Showing mathematical relationships with drawings or diagrams.

A. Mathematical pattern / गणितीय पैटर्न

B. Number line / संख्या रेखा

C. Spatial thinking / स्थानिक चिंतन

D. Pictorial representation / चित्रात्मक निरूपण

Correct answer / सही उत्तर: D. Pictorial representation / चित्रात्मक निरूपण

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication.

MCQ 250 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil draws groups of circles to represent multiplication.

A. Pictorial representation / चित्रात्मक निरूपण

B. Mathematical discussion / गणितीय चर्चा

C. Open-ended task / मुक्त उत्तर कार्य

D. Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: A. Pictorial representation / चित्रात्मक निरूपण

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication.

MCQ 251 • CORE PRACTICE · FORM 03

Which explanation best defines Pictorial representation / चित्रात्मक निरूपण?

A. A task allowing multiple valid solutions or approaches.

B. The value a digit has because of its position in a numeral.

C. Drawing a conclusion that follows from accepted premises or rules.

D. Showing mathematical relationships with drawings or diagrams.

Correct answer / सही उत्तर: D. Showing mathematical relationships with drawings or diagrams.

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication.

MCQ 252 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Pictorial representation / चित्रात्मक निरूपण?

A. A child immediately identifies three dots on a card.

B. A pupil draws groups of circles to represent multiplication.

C. A pupil can compare two lengths using the same unit.

D. A pupil draws equal groups to explain a multiplication expression.

Correct answer / सही उत्तर: B. A pupil draws groups of circles to represent multiplication.

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication.

MCQ 253 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Showing mathematical relationships with drawings or diagrams. (2) Arranging mathematical tasks from accessible experiences toward greater complexity.

A. Mathematical representation / गणितीय निरूपण | Task sequencing / कार्य क्रम

B. Pictorial representation / चित्रात्मक निरूपण | Task sequencing / कार्य क्रम

C. Task sequencing / कार्य क्रम | Pictorial representation / चित्रात्मक निरूपण

D. Pictorial representation / चित्रात्मक निरूपण | Mathematical language / गणितीय भाषा

Correct answer / सही उत्तर: B. Pictorial representation / चित्रात्मक निरूपण | Task sequencing / कार्य क्रम

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication. Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

GyanTech Guru Ji

MCQ 254 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil draws groups of circles to represent multiplication. (2) After counting five shells, a child answers how many without counting again.

A. Cardinality / गणन संख्या बोध | Pictorial representation / चित्रात्मक निरूपण

B. Pictorial representation / चित्रात्मक निरूपण | Cardinality / गणन संख्या बोध

C. Pictorial representation / चित्रात्मक निरूपण | Summative assessment / संकलनात्मक आकलन

D. Curriculum progression / पाठ्यचर्या प्रगति | Cardinality / गणन संख्या बोध

Correct answer / सही उत्तर: B. Pictorial representation / चित्रात्मक निरूपण | Cardinality / गणन संख्या बोध

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication. Cardinality / गणन संख्या बोध: Understanding that the last count word gives the total number of objects. Application: After counting five shells, a child answers how many without counting again.

MCQ 255 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Pictorial representation / चित्रात्मक निरूपण and Problem posing / समस्या निर्माण.

A. Showing mathematical relationships with drawings or diagrams. | Creating meaningful mathematical questions from a situation.

B. Showing mathematical relationships with drawings or diagrams. | An observable statement of expected mathematical learning.

C. Materials representing units, tens and other base-ten groupings. | Creating meaningful mathematical questions from a situation.

D. Creating meaningful mathematical questions from a situation. | Showing mathematical relationships with drawings or diagrams.

Correct answer / सही उत्तर: A. Showing mathematical relationships with drawings or diagrams. | Creating meaningful mathematical questions from a situation.

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

MCQ 256 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Pictorial representation / चित्रात्मक निरूपण and Place value / स्थानीय मान.

A. A pupil draws groups of circles to represent multiplication. | Children find different pairs of whole numbers whose sum is ten.

B. The 4 in forty-two represents four tens. | A pupil draws groups of circles to represent multiplication.

C. A pupil draws groups of circles to represent multiplication. | The 4 in forty-two represents four tens.

D. Children tally classmates' favourite fruits and compare frequencies. | The 4 in forty-two represents four tens.

Correct answer / सही उत्तर: C. A pupil draws groups of circles to represent multiplication. | The 4 in forty-two represents four tens.

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication. Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens.

MCQ 257 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Pictorial representation / चित्रात्मक निरूपण / Pictograph / चित्रालेख)

A. Pictograph / चित्रालेख → A space or organised set of resources for exploring mathematical ideas.

B. Pictorial representation / चित्रात्मक निरूपण → Representing data with pictures or symbols and a key when needed.

C. Pictorial representation / चित्रात्मक निरूपण → Showing mathematical relationships with drawings or diagrams.

D. Mathematics laboratory / गणित प्रयोगशाला → A structured resource whose activities can support mathematical understanding.

Correct answer / सही उत्तर: C. Pictorial representation / चित्रात्मक निरूपण → Showing mathematical relationships with drawings or diagrams.

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication.

MCQ 258 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Pictorial representation / चित्रात्मक निरूपण / Summative assessment / संकलनात्मक आकलन)

A. Pictorial representation / चित्रात्मक निरूपण → A pupil draws groups of circles to represent multiplication.

B. Summative assessment / संकलनात्मक आकलन → A child immediately identifies three dots on a card.

C. Subitizing / त्वरित संख्या पहचान → A child shows 8 minus 3 by moving left three steps.

D. Pictorial representation / चित्रात्मक निरूपण → A final unit task checks understanding of measurement concepts.

Correct answer / सही उत्तर: A. Pictorial representation / चित्रात्मक निरूपण → A pupil draws groups of circles to represent multiplication.

Explanation / व्याख्या

Pictorial representation / चित्रात्मक निरूपण: Showing mathematical relationships with drawings or diagrams. Application: A pupil draws groups of circles to represent multiplication.

MCQ 259 • CORE PRACTICE · FORM 01

Identify the concept described: Expressing relationships using mathematical symbols.

A. Symbolic representation / प्रतीकात्मक निरूपण

B. Formative assessment / निर्माणात्मक आकलन

C. Subitizing / त्वरित संख्या पहचान

D. Place value / स्थानीय मान

Correct answer / सही उत्तर: A. Symbolic representation / प्रतीकात्मक निरूपण

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12.

MCQ 260 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil records an equal-groups situation as 4 × 3 = 12.

A. Mathematical language / गणितीय भाषा

B. Local resources / स्थानीय संसाधन

C. Symbolic representation / प्रतीकात्मक निरूपण

D. Conservation of number / संख्या संरक्षण

Correct answer / सही उत्तर: C. Symbolic representation / प्रतीकात्मक निरूपण

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12.

MCQ 261 • CORE PRACTICE · FORM 03

Which explanation best defines Symbolic representation / प्रतीकात्मक निरूपण?

A. Forming a tentative generalisation from observed cases.

B. Flexible understanding of numbers, magnitudes and relationships.

C. Expressing relationships using mathematical symbols.

D. Using ongoing evidence to guide further mathematics learning.

Correct answer / सही उत्तर: C. Expressing relationships using mathematical symbols.

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12.

MCQ 262 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Symbolic representation / प्रतीकात्मक निरूपण?

A. A pupil records an equal-groups situation as 4 × 3 = 12.

B. Children extend a repeating red-blue-blue sequence.

C. Children find different pairs of whole numbers whose sum is ten.

D. A child immediately identifies three dots on a card.

Correct answer / सही उत्तर: A. A pupil records an equal-groups situation as 4 × 3 = 12.

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12.

MCQ 263 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Expressing relationships using mathematical symbols. (2) Using an ordered sequence of number names consistently when counting.

A. Symbolic representation / प्रतीकात्मक निरूपण | Counting principle / गणना सिद्धांत

B. Counting principle / गणना सिद्धांत | Symbolic representation / प्रतीकात्मक निरूपण

C. Symbolic representation / प्रतीकात्मक निरूपण | Learning outcome / अधिगम प्रतिफल

D. Mathematical pattern / गणितीय पैटर्न | Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: A. Symbolic representation / प्रतीकात्मक निरूपण | Counting principle / गणना सिद्धांत

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12. Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

MCQ 264 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil records an equal-groups situation as 4 × 3 = 12. (2) Pupils notice that adding two even numbers gives even results and test more cases.

A. Symbolic representation / प्रतीकात्मक निरूपण | Place value / स्थानीय मान

B. Inductive reasoning / आगमनात्मक तर्क| Symbolic representation / प्रतीकात्मक निरूपण

C. Place-value blocks / स्थानीय मान ब्लॉक | Inductive reasoning / आगमनात्मक तर्क

D. Symbolic representation / प्रतीकात्मक निरूपण | Inductive reasoning / आगमनात्मक तर्क

Correct answer / सही उत्तर: D. Symbolic representation / प्रतीकात्मक निरूपण | Inductive reasoning / आगमनात्मक तर्क

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12. Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 265 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Symbolic representation / प्रतीकात्मक निरूपण and Deductive reasoning / निगमनात्मक तर्क

A. Drawing a conclusion that follows from accepted premises or rules. | Expressing relationships using mathematical symbols.

B. Materials representing units, tens and other base-ten groupings. | Drawing a conclusion that follows from accepted premises or rules.

C. Expressing relationships using mathematical symbols. | Drawing a conclusion that follows from accepted premises or rules.

D. Expressing relationships using mathematical symbols. | Giving reasons to support a mathematical claim.

Correct answer / सही उत्तर: C. Expressing relationships using mathematical symbols. | Drawing a conclusion that follows from accepted premises or rules.

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12. Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules. Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

MCQ 266 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Symbolic representation / प्रतीकात्मक निरूपण and Problem posing / समस्या निर्माण.

A. A teacher changes grouping after observing pupils' fraction strategies. | Pupils invent questions about quantities shown in a market picture.

B. A pupil records an equal-groups situation as 4 × 3 = 12. | The teacher explains how to improve the alignment of tens and ones.

C. Pupils invent questions about quantities shown in a market picture. | A pupil records an equal-groups situation as 4 × 3 = 12.

D. A pupil records an equal-groups situation as 4 × 3 = 12. | Pupils invent questions about quantities shown in a market picture.

Correct answer / सही उत्तर: D. A pupil records an equal-groups situation as 4 × 3 = 12. | Pupils invent questions about quantities shown in a market picture.

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

MCQ 267 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Symbolic representation / प्रतीकात्मक निरूपण / Mathematical problem solving / गणितीय समस्या समाधान)

A. Spatial thinking / स्थानिक चिंतन → Creating meaningful mathematical questions from a situation.

B. Symbolic representation / प्रतीकात्मक निरूपण → Expressing relationships using mathematical symbols.

C. Symbolic representation / प्रतीकात्मक निरूपण → Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

D. Mathematical problem solving / गणितीय समस्या समाधान → Reasoning about shapes, positions and relationships in space.

Correct answer / सही उत्तर: B. Symbolic representation / प्रतीकात्मक निरूपण → Expressing relationships using mathematical symbols.

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12.

MCQ 268 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Symbolic representation / प्रतीकात्मक निरूपण / Counting principle / गणना सिद्धांत)

A. Mathematical competency / गणितीय दक्षता → Children use market price labels for a money comparison task.

B. Symbolic representation / प्रतीकात्मक निरूपण → A child counts each object once in a stable order.

C. Counting principle / गणना सिद्धांत → A learner chooses an appropriate unit to measure a desk.

D. Symbolic representation / प्रतीकात्मक निरूपण → A pupil records an equal-groups situation as 4 × 3 = 12.

Correct answer / सही उत्तर: D. Symbolic representation / प्रतीकात्मक निरूपण → A pupil records an equal-groups situation as 4 × 3 = 12.

Explanation / व्याख्या

Symbolic representation / प्रतीकात्मक निरूपण: Expressing relationships using mathematical symbols. Application: A pupil records an equal-groups situation as 4 × 3 = 12.

MCQ 269 • CORE PRACTICE · FORM 01

Identify the concept described: Allowing different valid methods for solving a problem.

A. Qualitative feedback / गुणात्मक प्रतिक्रिया

B. Multiple strategies / अनेक रणनीतियाँ

C. Place-value blocks / स्थानीय मान ब्लॉक

D. Learning outcome / अधिगम प्रतिफल

Correct answer / सही उत्तर: B. Multiple strategies / अनेक रणनीतियाँ

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem. Application: Two pupils solve 18 + 7 by counting on and by making twenty.

MCQ 270 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Two pupils solve 18 + 7 by counting on and by making twenty.

A. Mathematical language / गणितीय भाषा

B. Multiple strategies / अनेक रणनीतियाँ

C. Local resources / स्थानीय संसाधन

D. Mathematical competency / गणितीय दक्षता

Correct answer / सही उत्तर: B. Multiple strategies / अनेक रणनीतियाँ

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem.
Application: Two pupils solve 18 + 7 by counting on and by making twenty.

MCQ 271 • CORE PRACTICE · FORM 03

Which explanation best defines Multiple strategies / अनेक रणनीतियाँ?

A. A structured resource whose activities can support mathematical understanding.

B. Materials representing units, tens and other base-ten groupings.

C. Allowing different valid methods for solving a problem.

D. Reasoning about shapes, positions and relationships in space.

Correct answer / सही उत्तर: C. Allowing different valid methods for solving a problem.

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem.
Application: Two pupils solve 18 + 7 by counting on and by making twenty.

MCQ 272 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Multiple strategies / अनेक रणनीतियाँ?

A. A child shows 8 minus 3 by moving left three steps.

B. Two pupils solve 18 + 7 by counting on and by making twenty.

C. Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

D. Counting and grouping experiences precede formal multiplication notation.

Correct answer / सही उत्तर: B. Two pupils solve 18 + 7 by counting on and by making twenty.

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem.

Application: Two pupils solve 18 + 7 by counting on and by making twenty.

MCQ 273 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Allowing different valid methods for solving a problem. (2) Drawing a conclusion that follows from accepted premises or rules.

A. Multiple strategies / अनेक रणनीतियाँ | Performance task / प्रदर्शन कार्य

B. Multiple strategies / अनेक रणनीतियाँ | Deductive reasoning / निगमनात्मक तर्क

C. Spatial thinking / स्थानिक चिंतन | Deductive reasoning / निगमनात्मक तर्क

D. Deductive reasoning / निगमनात्मक तर्क| Multiple strategies / अनेक रणनीतियाँ

Correct answer / सही उत्तर: B. Multiple strategies / अनेक रणनीतियाँ | Deductive reasoning / निगमनात्मक तर्क

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem.

Application: Two pupils solve 18 + 7 by counting on and by making twenty. Deductive reasoning / निगमनात्मक तर्क Drawing a conclusion that follows from accepted premises or rules.

Application: Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

MCQ 274 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Two pupils solve 18 + 7 by counting on and by making twenty. (2) A pupil writes 7 > 5 to express a comparison.

A. Multiple strategies / अनेक रणनीतियाँ | Mathematical language / गणितीय भाषा

B. Qualitative feedback / गुणात्मक प्रतिक्रिया | Mathematical language / गणितीय भाषा

C. Multiple strategies / अनेक रणनीतियाँ | Mathematical rubric / गणितीय मानदंड तालिका

D. Mathematical language / गणितीय भाषा | Multiple strategies / अनेक रणनीतियाँ

Correct answer / सही उत्तर: A. Multiple strategies / अनेक रणनीतियाँ | Mathematical language / गणितीय भाषा

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem. Application: Two pupils solve 18 + 7 by counting on and by making twenty. Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

GyanTech Guru Ji

MCQ 275 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Multiple strategies / अनेक रणनीतियाँ and One-to-one correspondence / एक-एक संगति.

A. Allowing different valid methods for solving a problem. | Materials representing units, tens and other base-ten groupings.

B. Criteria describing quality of mathematical reasoning and representation. | Matching exactly one element of one collection to each element of another.

C. Matching exactly one element of one collection to each element of another. | Allowing different valid methods for solving a problem.

D. Allowing different valid methods for solving a problem. | Matching exactly one element of one collection to each element of another.

Correct answer / सही उत्तर: D. Allowing different valid methods for solving a problem. | Matching exactly one element of one collection to each element of another.

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem. Application: Two pupils solve 18 + 7 by counting on and by making twenty. One-to-one correspondence / एक-एक संगति: Matching exactly one element of one collection to each element of another. Application: A child gives one pencil to each pupil to check if there are enough.

MCQ 276 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Multiple strategies / अनेक रणनीतियाँ and Mathematical rubric / गणितीय मानदंड तालिका.

A. A child gives one pencil to each pupil to check if there are enough. | A teacher assesses explanation, strategy and accuracy separately.

B. Two pupils solve 18 + 7 by counting on and by making twenty. | Each apple icon in a chart stands for two votes.

C. Two pupils solve 18 + 7 by counting on and by making twenty. | A teacher assesses explanation, strategy and accuracy separately.

D. A teacher assesses explanation, strategy and accuracy separately. | Two pupils solve 18 + 7 by counting on and by making twenty.

Correct answer / सही उत्तर: C. Two pupils solve 18 + 7 by counting on and by making twenty. | A teacher assesses explanation, strategy and accuracy separately.

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem. Application: Two pupils solve 18 + 7 by counting on and by making twenty. Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

MCQ 277 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Multiple strategies / अनेक रणनीतियाँ / Cardinality / गणन संख्या बोध)

A. Unit planning / इकाई योजना → Forming a tentative generalisation from observed cases.

B. Multiple strategies / अनेक रणनीतियाँ → Understanding that the last count word gives the total number of objects.

C. Cardinality / गणन संख्या बोध → Sequencing related lessons to develop mathematical goals over time.

D. Multiple strategies / अनेक रणनीतियाँ → Allowing different valid methods for solving a problem.

Correct answer / सही उत्तर: D. Multiple strategies / अनेक रणनीतियाँ → Allowing different valid methods for solving a problem.

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem.
Application: Two pupils solve 18 + 7 by counting on and by making twenty.

GyanTech

MCQ 278 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Multiple strategies / अनेक रणनीतियाँ / Data handling / आँकड़ा प्रबंधन)

A. Multiple strategies / अनेक रणनीतियाँ → Two pupils solve 18 + 7 by counting on and by making twenty.

B. Multiple strategies / अनेक रणनीतियाँ → Children tally classmates' favourite fruits and compare frequencies.

C. Inductive reasoning / आगमनात्मक तर्क→ Children represent a sharing situation using division.

D. Data handling / आँकड़ा प्रबंधन → Pupils notice that adding two even numbers gives even results and test more cases.

Correct answer / सही उत्तर: A. Multiple strategies / अनेक रणनीतियाँ → Two pupils solve 18 + 7 by counting on and by making twenty.

Explanation / व्याख्या

Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem. Application: Two pupils solve 18 + 7 by counting on and by making twenty.

MCQ 279 • CORE PRACTICE · FORM 01

Identify the concept described: Finding a reasonable approximate quantity or result.

A. Abstraction / अमूर्तीकरण

B. Estimation / अनुमान

C. Unit planning / इकाई योजना

D. Diagnostic assessment / निदानात्मक आकलन

Correct answer / सही उत्तर: B. Estimation / अनुमान

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 280 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A child estimates the number of pencils in a jar before counting.

A. Estimation / अनुमान

B. Task sequencing / कार्य क्रम

C. Data handling / आँकड़ा प्रबंधन

D. Open-ended task / मुक्त उत्तर कार्य

Correct answer / सही उत्तर: A. Estimation / अनुमान

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 281 • CORE PRACTICE · FORM 03

Which explanation best defines Estimation / अनुमान?

A. Finding a reasonable approximate quantity or result.

B. Examining learner mistakes to infer their underlying reasoning.

C. Materials available in the community used for mathematical exploration.

D. Giving reasons to support a mathematical claim.

Correct answer / सही उत्तर: A. Finding a reasonable approximate quantity or result.

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 282 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Estimation / अनुमान?

A. Children use market price labels for a money comparison task.

B. Pupils notice that adding two even numbers gives even results and test more cases.

C. The 4 in forty-two represents four tens.

D. A child estimates the number of pencils in a jar before counting.

Correct answer / सही उत्तर: D. A child estimates the number of pencils in a jar before counting.

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 283 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Finding a reasonable approximate quantity or result. (2) A structured resource whose activities can support mathematical understanding.

A. Mathematics textbook / गणित पाठ्यपुस्तक | Estimation / अनुमान

B. Inductive reasoning / आगमनात्मक तर्क| Mathematics textbook / गणित पाठ्यपुस्तक

C. Estimation / अनुमान | One-to-one correspondence / एक-एक संगति

D. Estimation / अनुमान | Mathematics textbook / गणित पाठ्यपुस्तक

Correct answer / सही उत्तर: D. Estimation / अनुमान | Mathematics textbook / गणित पाठ्यपुस्तक

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting. Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 284 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A child estimates the number of pencils in a jar before counting. (2) Pupils invent questions about quantities shown in a market picture.

A. Estimation / अनुमान | Counting principle / गणना सिद्धांत

B. Mathematical representation / गणितीय निरूपण | Problem posing / समस्या निर्माण

C. Problem posing / समस्या निर्माण | Estimation / अनुमान

D. Estimation / अनुमान | Problem posing / समस्या निर्माण

Correct answer / सही उत्तर: D. Estimation / अनुमान | Problem posing / समस्या निर्माण

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

GyanTech Guru Ji

MCQ 285 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Estimation / अनुमान and Mathematical argument / गणितीय तर्क प्रस्तुति.

A. Finding a reasonable approximate quantity or result. | Giving reasons to support a mathematical claim.

B. Finding a reasonable approximate quantity or result. | A regularity described by a relationship or rule.

C. A task allowing multiple valid solutions or approaches. | Giving reasons to support a mathematical claim.

D. Giving reasons to support a mathematical claim. | Finding a reasonable approximate quantity or result.

Correct answer / सही उत्तर: A. Finding a reasonable approximate quantity or result. | Giving reasons to support a mathematical claim.

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting. Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area.

MCQ 286 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Estimation / अनुमान and Performance task / प्रदर्शन कार्य.

A. Children arrange sticks from shortest to longest. | Pupils measure and compare real classroom objects.

B. A child estimates the number of pencils in a jar before counting. | Pupils measure and compare real classroom objects.

C. Pupils measure and compare real classroom objects. | A child estimates the number of pencils in a jar before counting.

D. A child estimates the number of pencils in a jar before counting. | Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

Correct answer / सही उत्तर: B. A child estimates the number of pencils in a jar before counting. | Pupils measure and compare real classroom objects.

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting. Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 287 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Estimation / अनुमान / Mathematical argument / गणितीय तर्क प्रस्तुति)

A. Mathematical argument / गणितीय तर्क प्रस्तुति → Using ongoing evidence to guide further mathematics learning.

B. Formative assessment / निर्माणात्मक आकलन → Understanding that the last count word gives the total number of objects.

C. Estimation / अनुमान → Finding a reasonable approximate quantity or result.

D. Estimation / अनुमान → Giving reasons to support a mathematical claim.

Correct answer / सही उत्तर: C. Estimation / अनुमान → Finding a reasonable approximate quantity or result.

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 288 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Estimation / अनुमान / Local resources / स्थानीय संसाधन)

A. Local resources / स्थानीय संसाधन → A child explains why two differently arranged shapes have equal area.

B. Mathematical argument / गणितीय तर्क प्रस्तुति → The 4 in forty-two represents four tens.

C. Estimation / अनुमान → Children use market price labels for a money comparison task.

D. Estimation / अनुमान → A child estimates the number of pencils in a jar before counting.

Correct answer / सही उत्तर: D. Estimation / अनुमान → A child estimates the number of pencils in a jar before counting.

Explanation / व्याख्या

Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 289 • CORE PRACTICE · FORM 01

Identify the concept described: Using flexible number relationships without written standard algorithms.

A. Mathematical discussion / गणितीय चर्चा

B. Mental mathematics / मानसिक गणना

C. Mathematical rubric / गणितीय मानदंड तालिका

D. Error analysis / त्रुटि विश्लेषण

Correct answer / सही उत्तर: B. Mental mathematics / मानसिक गणना

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

MCQ 290 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil computes 19 plus 26 as 20 plus 25.

A. Mathematical argument / गणितीय तर्क प्रस्तुति

B. Task sequencing / कार्य क्रम

C. Mental mathematics / मानसिक गणना

D. Cardinality / गणन संख्या बोध

Correct answer / सही उत्तर: C. Mental mathematics / मानसिक गणना

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

MCQ 291 • CORE PRACTICE · FORM 03

Which explanation best defines Mental mathematics / मानसिक गणना?

A. Investigating particular errors or gaps in mathematical understanding.

B. Using flexible number relationships without written standard algorithms.

C. Creating meaningful mathematical questions from a situation.

D. Organising mathematical ideas in a coherent developmental sequence.

Correct answer / सही उत्तर: B. Using flexible number relationships without written standard algorithms.

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

MCQ 292 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mental mathematics / मानसिक गणना?

A. A pupil computes 19 plus 26 as 20 plus 25.

B. A pupil writes 7 > 5 to express a comparison.

C. The teacher explains how to improve the alignment of tens and ones.

D. A child shows 8 minus 3 by moving left three steps.

Correct answer / सही उत्तर: A. A pupil computes 19 plus 26 as 20 plus 25.

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

MCQ 293 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Using flexible number relationships without written standard algorithms. (2) Sharing, comparing and justifying ways of solving a problem.

A. Mathematical discussion / गणितीय चर्चा | Mental mathematics / मानसिक गणना

B. Mental mathematics / मानसिक गणना | Learning outcome / अधिगम प्रतिफल

C. Mental mathematics / मानसिक गणना | Mathematical discussion / गणितीय चर्चा

D. Mathematical pattern / गणितीय पैटर्न | Mathematical discussion / गणितीय चर्चा

Correct answer / सही उत्तर: C. Mental mathematics / मानसिक गणना | Mathematical discussion / गणितीय चर्चा

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25. Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

GyanTech Guru Ji

MCQ 294 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil computes 19 plus 26 as 20 plus 25. (2) A teacher changes grouping after observing pupils' fraction strategies.

A. Formative assessment / निर्माणात्मक आकलन | Mental mathematics / मानसिक गणना

B. Mental mathematics / मानसिक गणना | Formative assessment / निर्माणात्मक आकलन

C. Mathematical competency / गणितीय दक्षता | Formative assessment / निर्माणात्मक आकलन

D. Mental mathematics / मानसिक गणना | Mathematical problem solving / गणितीय समस्या समाधान

Correct answer / सही उत्तर: B. Mental mathematics / मानसिक गणना | Formative assessment / निर्माणात्मक आकलन

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25. Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

MCQ 295 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mental mathematics / मानसिक गणना and Mathematical discussion / गणितीय चर्चा.

A. Sharing, comparing and justifying ways of solving a problem. | Using flexible number relationships without written standard algorithms.

B. Using flexible number relationships without written standard algorithms. | Sharing, comparing and justifying ways of solving a problem.

C. Using flexible number relationships without written standard algorithms. | Representing common mathematical properties apart from particular objects.

D. Using ongoing evidence to guide further mathematics learning. | Sharing, comparing and justifying ways of solving a problem.

Correct answer / सही उत्तर: B. Using flexible number relationships without written standard algorithms. | Sharing, comparing and justifying ways of solving a problem.

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25. Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 296 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mental mathematics / मानसिक गणना and Mathematical language / गणितीय भाषा.

A. The teacher explains how to improve the alignment of tens and ones. | A pupil writes 7 > 5 to express a comparison.

B. A pupil writes 7 > 5 to express a comparison. | A pupil computes 19 plus 26 as 20 plus 25.

C. A pupil computes 19 plus 26 as 20 plus 25. | A final unit task checks understanding of measurement concepts.

D. A pupil computes 19 plus 26 as 20 plus 25. | A pupil writes 7 > 5 to express a comparison.

Correct answer / सही उत्तर: D. A pupil computes 19 plus 26 as 20 plus 25. | A pupil writes 7 > 5 to express a comparison.

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25. Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

MCQ 297 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mental mathematics / मानसिक गणना / Formative assessment / निर्माणात्मक आकलन)

A. Formative assessment / निर्माणात्मक आकलन → Understanding that the last count word gives the total number of objects.

B. Cardinality / गणन संख्या बोध → Materials available in the community used for mathematical exploration.

C. Mental mathematics / मानसिक गणना → Using flexible number relationships without written standard algorithms.

D. Mental mathematics / मानसिक गणना → Using ongoing evidence to guide further mathematics learning.

Correct answer / सही उत्तर: C. Mental mathematics / मानसिक गणना → Using flexible number relationships without written standard algorithms.

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

MCQ 298 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mental mathematics / मानसिक गणना / Mathematical rubric / गणितीय मानदंड तालिका)

A. Curriculum progression / पाठ्यचर्या प्रगति → Pairs compare two methods for adding 37 and 28.

B. Mathematical rubric / गणितीय मानदंड तालिका → Counting and grouping experiences precede formal multiplication notation.

C. Mental mathematics / मानसिक गणना → A pupil computes 19 plus 26 as 20 plus 25.

D. Mental mathematics / मानसिक गणना → A teacher assesses explanation, strategy and accuracy separately.

Correct answer / सही उत्तर: C. Mental mathematics / मानसिक गणना → A pupil computes 19 plus 26 as 20 plus 25.

Explanation / व्याख्या

Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

MCQ 299 • CORE PRACTICE · FORM 01

Identify the concept described: Measuring using informal repeatable units.

A. Non-standard measurement / अमानक मापन

B. Diagnostic assessment / निदानात्मक आकलन

C. Mathematical argument / गणितीय तर्क प्रस्तुति

D. Problem posing / समस्या निर्माण

Correct answer / सही उत्तर: A. Non-standard measurement / अमानक मापन

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units. Application: Children measure a desk using equal paper strips.

MCQ 300 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children measure a desk using equal paper strips.

A. Performance task / प्रदर्शन कार्य

B. One-to-one correspondence / एक-एक संगति

C. Non-standard measurement / अमानक मापन

D. Curriculum progression / पाठ्यचर्या प्रगति

Correct answer / सही उत्तर: C. Non-standard measurement / अमानक मापन

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units.

Application: Children measure a desk using equal paper strips.

MCQ 301 • CORE PRACTICE · FORM 03

Which explanation best defines Non-standard measurement / अमानक मापन?

A. Measuring using informal repeatable units.

B. Expressing ideas through objects, pictures, symbols or language.

C. Representing common mathematical properties apart from particular objects.

D. Applying mathematical understanding and processes in meaningful situations.

Correct answer / सही उत्तर: A. Measuring using informal repeatable units.

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units.

Application: Children measure a desk using equal paper strips.

GyanTech Guru Ji

MCQ 302 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Non-standard measurement / अमानक मापन?

A. A child explains why two differently arranged shapes have equal area.

B. Children measure a desk using equal paper strips.

C. A teacher asks how a child obtained 402 when adding 23 and 19.

D. After counting five shells, a child answers how many without counting again.

Correct answer / सही उत्तर: B. Children measure a desk using equal paper strips.

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units. Application: Children measure a desk using equal paper strips.

MCQ 303 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Measuring using informal repeatable units. (2) Sharing, comparing and justifying ways of solving a problem.

A. Non-standard measurement / अमानक मापन | Place-value blocks / स्थानीय मान ब्लॉक

B. Mathematical discussion / गणितीय चर्चा | Non-standard measurement / अमानक मापन

C. Unit planning / इकाई योजना | Mathematical discussion / गणितीय चर्चा

D. Non-standard measurement / अमानक मापन | Mathematical discussion / गणितीय चर्चा

Correct answer / सही उत्तर: D. Non-standard measurement / अमानक मापन | Mathematical discussion / गणितीय चर्चा

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units. Application: Children measure a desk using equal paper strips. Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 304 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children measure a desk using equal paper strips. (2) A teacher adapts a book exercise into a hands-on activity.

A. Non-standard measurement / अमानक मापन | Mathematics textbook / गणित पाठ्यपुस्तक

B. Deductive reasoning / निगमनात्मक तर्क| Mathematics textbook / गणित पाठ्यपुस्तक

C. Non-standard measurement / अमानक मापन | Mathematical pattern / गणितीय पैटर्न

D. Mathematics textbook / गणित पाठ्यपुस्तक | Non-standard measurement / अमानक मापन

Correct answer / सही उत्तर: A. Non-standard measurement / अमानक मापन | Mathematics textbook / गणित पाठ्यपुस्तक

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units. Application: Children measure a desk using equal paper strips. Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 305 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Non-standard measurement / अमानक मापन and Mathematical argument / गणितीय तर्क प्रस्तुति.

A. Selecting and evaluating strategies to solve an unfamiliar mathematical situation. | Giving reasons to support a mathematical claim.

B. Measuring using informal repeatable units. | Representing common mathematical properties apart from particular objects.

C. Giving reasons to support a mathematical claim. | Measuring using informal repeatable units.

D. Measuring using informal repeatable units. | Giving reasons to support a mathematical claim.

Correct answer / सही उत्तर: D. Measuring using informal repeatable units. | Giving reasons to support a mathematical claim.

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units. Application: Children measure a desk using equal paper strips. Mathematical argument / गणितीय तर्क प्रस्तुति: Giving reasons to support a mathematical claim. Application: A child explains why two differently arranged shapes have equal area.

MCQ 306 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Non-standard measurement / अमानक मापन and Mathematical discussion / गणितीय चर्चा.

A. Children measure a desk using equal paper strips. | Pairs compare two methods for adding 37 and 28.

B. Pairs compare two methods for adding 37 and 28. | Children measure a desk using equal paper strips.

C. Children measure a desk using equal paper strips. | Children represent three apples and three stones with the same number 3.

D. Pupils invent questions about quantities shown in a market picture. | Pairs compare two methods for adding 37 and 28.

Correct answer / सही उत्तर: A. Children measure a desk using equal paper strips. | Pairs compare two methods for adding 37 and 28.

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units. Application: Children measure a desk using equal paper strips. Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 307 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Non-standard measurement / अमानक मापन / Number line / संख्या रेखा)

A. Spatial thinking / स्थानिक चिंतन → Arranging items in order by a measurable property.

B. Number line / संख्या रेखा → Reasoning about shapes, positions and relationships in space.

C. Non-standard measurement / अमानक मापन → A linear representation of ordered numerical positions.

D. Non-standard measurement / अमानक मापन → Measuring using informal repeatable units.

Correct answer / सही उत्तर: D. Non-standard measurement / अमानक मापन → Measuring using informal repeatable units.

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units.
Application: Children measure a desk using equal paper strips.

GyanTech Guru Ji

MCQ 308 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Non-standard measurement / अमानक मापन / Summative assessment / संकलनात्मक आकलन)

A. Summative assessment / संकलनात्मक आकलन → A lesson moves from equal groups to drawings and multiplication notation.

B. Non-standard measurement / अमानक मापन → A final unit task checks understanding of measurement concepts.

C. Task sequencing / कार्य क्रम → Children arrange sticks from shortest to longest.

D. Non-standard measurement / अमानक मापन → Children measure a desk using equal paper strips.

Correct answer / सही उत्तर: D. Non-standard measurement / अमानक मापन → Children measure a desk using equal paper strips.

Explanation / व्याख्या

Non-standard measurement / अमानक मापन: Measuring using informal repeatable units. Application: Children measure a desk using equal paper strips.

MCQ 309 • CORE PRACTICE · FORM 01

Identify the concept described: Identifying and explaining spatial properties and relationships.

A. Geometric reasoning / ज्यामितीय तर्क

B. Unit planning / इकाई योजना

C. Subitizing / त्वरित संख्या पहचान

D. Place value / स्थानीय मान

Correct answer / सही उत्तर: A. Geometric reasoning / ज्यामितीय तर्क

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 310 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Pupils sort quadrilaterals according to their sides and angles.

A. Subitizing / त्वरित संख्या पहचान

B. Mathematical rubric / गणितीय मानदंड तालिका

C. Mathematical language / गणितीय भाषा

D. Geometric reasoning / ज्यामितीय तर्क

Correct answer / सही उत्तर: D. Geometric reasoning / ज्यामितीय तर्क

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 311 • CORE PRACTICE · FORM 03

Which explanation best defines Geometric reasoning / ज्यामितीय तर्क?

A. A space or organised set of resources for exploring mathematical ideas.

B. Materials available in the community used for mathematical exploration.

C. Understanding that number remains unchanged when objects are rearranged without adding or removing any.

D. Identifying and explaining spatial properties and relationships.

Correct answer / सही उत्तर: D. Identifying and explaining spatial properties and relationships.

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 312 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Geometric reasoning / ज्यामितीय तर्क?

A. Children extend a repeating red-blue-blue sequence.

B. Children tally classmates' favourite fruits and compare frequencies.

C. Pupils sort quadrilaterals according to their sides and angles.

D. A pupil explains why 49 plus 21 is close to 70 before calculating.

Correct answer / सही उत्तर: C. Pupils sort quadrilaterals according to their sides and angles.

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 313 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Identifying and explaining spatial properties and relationships. (2) Sharing, comparing and justifying ways of solving a problem.

A. Learning outcome / अधिगम प्रतिफल | Mathematical discussion / गणितीय चर्चा

B. Geometric reasoning / ज्यामितीय तर्क| Mathematical discussion / गणितीय चर्चा

C. Mathematical discussion / गणितीय चर्चा | Geometric reasoning / ज्यामितीय तर्क

D. Geometric reasoning / ज्यामितीय तर्क| Number line / संख्या रेखा

Correct answer / सही उत्तर: B. Geometric reasoning / ज्यामितीय तर्क| Mathematical discussion / गणितीय चर्चा

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles. Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

GyanTech Guru Ji

MCQ 314 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Pupils sort quadrilaterals according to their sides and angles. (2) A pupil draws equal groups to explain a multiplication expression.

A. Geometric reasoning / ज्यामितीय तर्क| Problem posing / समस्या निर्माण

B. Qualitative feedback / गुणात्मक प्रतिक्रिया | Mathematical representation / गणितीय निरूपण

C. Mathematical representation / गणितीय निरूपण | Geometric reasoning / ज्यामितीय तर्क

D. Geometric reasoning / ज्यामितीय तर्क| Mathematical representation / गणितीय निरूपण

Correct answer / सही उत्तर: D. Geometric reasoning / ज्यामितीय तर्क| Mathematical representation / गणितीय निरूपण

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क: Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles. Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

GyanTech

MCQ 315 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Geometric reasoning / ज्यामितीय तर्क and Number sense / संख्या बोध.

A. Flexible understanding of numbers, magnitudes and relationships. | Identifying and explaining spatial properties and relationships.

B. Identifying and explaining spatial properties and relationships. | Creating meaningful mathematical questions from a situation.

C. Arranging mathematical tasks from accessible experiences toward greater complexity. | Flexible understanding of numbers, magnitudes and relationships.

D. Identifying and explaining spatial properties and relationships. | Flexible understanding of numbers, magnitudes and relationships.

Correct answer / सही उत्तर: D. Identifying and explaining spatial properties and relationships. | Flexible understanding of numbers, magnitudes and relationships.

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles. Number sense / संख्या बोध: Flexible understanding of numbers, magnitudes and relationships. Application: A pupil explains why 49 plus 21 is close to 70 before calculating.

MCQ 316 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Geometric reasoning / ज्यामितीय तर्क and Counting principle / गणना सिद्धांत.

A. Pairs compare two methods for adding 37 and 28. | A child counts each object once in a stable order.

B. Pupils sort quadrilaterals according to their sides and angles. | Pupils invent questions about quantities shown in a market picture.

C. Pupils sort quadrilaterals according to their sides and angles. | A child counts each object once in a stable order.

D. A child counts each object once in a stable order. | Pupils sort quadrilaterals according to their sides and angles.

Correct answer / सही उत्तर:

C. Pupils sort quadrilaterals according to their sides and angles. | A child counts each object once in a stable order.

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क: Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles. Counting principle / गणना सिद्धांत: Using an ordered sequence of number names consistently when counting. Application: A child counts each object once in a stable order.

MCQ 317 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Geometric reasoning / ज्यामितीय तर्क/ One-to-one correspondence / एक-एक संगति)

A. Spatial thinking / स्थानिक चिंतन → Descriptive information about strengths and next steps in learning.

B. One-to-one correspondence / एक-एक संगति → Reasoning about shapes, positions and relationships in space.

C. Geometric reasoning / ज्यामितीय तर्क→ Matching exactly one element of one collection to each element of another.

D. Geometric reasoning / ज्यामितीय तर्क→ Identifying and explaining spatial properties and relationships.

Correct answer / सही उत्तर: D. Geometric reasoning / ज्यामितीय तर्क→ Identifying and explaining spatial properties and relationships.

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 318 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Geometric reasoning / ज्यामितीय तर्क/ Performance task / प्रदर्शन कार्य)

A. Geometric reasoning / ज्यामितीय तर्क→ Pupils measure and compare real classroom objects.

B. Geometric reasoning / ज्यामितीय तर्क→ Pupils sort quadrilaterals according to their sides and angles.

C. Pictograph / चित्रालेख → A pupil draws equal groups to explain a multiplication expression.

D. Performance task / प्रदर्शन कार्य → Each apple icon in a chart stands for two votes.

Correct answer / सही उत्तर: B. Geometric reasoning / ज्यामितीय तर्क→ Pupils sort quadrilaterals according to their sides and angles.

Explanation / व्याख्या

Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 319 • CORE PRACTICE · FORM 01

Identify the concept described: Partitioning a quantity into groups of equal size.

A. Equal sharing / समान बाँट

B. Mathematization / गणितीकरण

C. Curriculum progression / पाठ्यचर्या प्रगति

D. One-to-one correspondence / एक-एक संगति

Correct answer / सही उत्तर: A. Equal sharing / समान बाँट

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups.

MCQ 320 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children share 12 counters among three groups.

A. Mathematical problem solving / गणितीय समस्या समाधान

B. Equal sharing / समान बाँट

C. Inductive reasoning / आगमनात्मक तर्क

D. Mathematics laboratory / गणित प्रयोगशाला

Correct answer / सही उत्तर: B. Equal sharing / समान बाँट

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups.

MCQ 321 • CORE PRACTICE · FORM 03

Which explanation best defines Equal sharing / समान बाँट?

A. A task requiring demonstration of mathematical knowledge in action.

B. Expressing or analysing real situations using mathematical ideas.

C. Partitioning a quantity into groups of equal size.

D. Applying mathematical understanding and processes in meaningful situations.

Correct answer / सही उत्तर: C. Partitioning a quantity into groups of equal size.

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups.

GyanTech Guru Ji

MCQ 322 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Equal sharing / समान बाँट?

A. Counting and grouping experiences precede formal multiplication notation.

B. A pupil exchanges ten unit cubes for a ten rod.

C. A learner chooses an appropriate unit to measure a desk.

D. Children share 12 counters among three groups.

Correct answer / सही उत्तर: D. Children share 12 counters among three groups.

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups.

MCQ 323 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Partitioning a quantity into groups of equal size. (2) Materials representing units, tens and other base-ten groupings.

A. Place-value blocks / स्थानीय मान ब्लॉक | Equal sharing / समान बाँट

B. Equal sharing / समान बाँट | Data handling / आँकड़ा प्रबंधन

C. Mathematization / गणितीकरण | Place-value blocks / स्थानीय मान ब्लॉक

D. Equal sharing / समान बाँट | Place-value blocks / स्थानीय मान ब्लॉक

Correct answer / सही उत्तर: D. Equal sharing / समान बाँट | Place-value blocks / स्थानीय मान ब्लॉक

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups. Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

GyanTech Guru Ji

MCQ 324 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children share 12 counters among three groups. (2) A learner chooses an appropriate unit to measure a desk.

A. Equal sharing / समान बाँट | Problem posing / समस्या निर्माण

B. Mathematics textbook / गणित पाठ्यपुस्तक | Mathematical competency / गणितीय दक्षता

C. Equal sharing / समान बाँट | Mathematical competency / गणितीय दक्षता

D. Mathematical competency / गणितीय दक्षता | Equal sharing / समान बाँट

Correct answer / सही उत्तर: C. Equal sharing / समान बाँट | Mathematical competency / गणितीय दक्षता

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups. Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

GyanTech Guru Ji

MCQ 325 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Equal sharing / समान बाँट and Pictograph / चित्रालेख.

A. Partitioning a quantity into groups of equal size. | Representing data with pictures or symbols and a key when needed.

B. Partitioning a quantity into groups of equal size. | Criteria describing quality of mathematical reasoning and representation.

C. Applying mathematical understanding and processes in meaningful situations. | Representing data with pictures or symbols and a key when needed.

D. Representing data with pictures or symbols and a key when needed. | Partitioning a quantity into groups of equal size.

Correct answer / सही उत्तर: A. Partitioning a quantity into groups of equal size. | Representing data with pictures or symbols and a key when needed.

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups. Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes.

MCQ 326 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Equal sharing / समान बाँट and Mathematical rubric / गणितीय मानदंड तालिका.

A. Children share 12 counters among three groups. | A teacher assesses explanation, strategy and accuracy separately.

B. Children share 12 counters among three groups. | Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

C. Pupils plan how to distribute materials fairly and explain the solution. | A teacher assesses explanation, strategy and accuracy separately.

D. A teacher assesses explanation, strategy and accuracy separately. | Children share 12 counters among three groups.

Correct answer / सही उत्तर: A. Children share 12 counters among three groups. | A teacher assesses explanation, strategy and accuracy separately.

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups. Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

MCQ 327 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Equal sharing / समान बाँट / Mathematical argument / गणितीय तर्क प्रस्तुति)

A. Mathematical argument / गणितीय तर्क प्रस्तुति → Understanding that number remains unchanged when objects are rearranged without adding or removing any.

B. Equal sharing / समान बाँट → Partitioning a quantity into groups of equal size.

C. Conservation of number / संख्या संरक्षण → A task requiring demonstration of mathematical knowledge in action.

D. Equal sharing / समान बाँट → Giving reasons to support a mathematical claim.

Correct answer / सही उत्तर: B. Equal sharing / समान बाँट → Partitioning a quantity into groups of equal size.

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups.

GyanTech Guru Ji

MCQ 328 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Equal sharing / समान बाँट / Mathematical pattern / गणितीय पैटर्न)

A. Mathematical pattern / गणितीय पैटर्न → A pupil can compare two lengths using the same unit.

B. Learning outcome / अधिगम प्रतिफल → A teacher plans several connected lessons on measurement.

C. Equal sharing / समान बाँट → Children share 12 counters among three groups.

D. Equal sharing / समान बाँट → Children extend a repeating red-blue-blue sequence.

Correct answer / सही उत्तर: C. Equal sharing / समान बाँट → Children share 12 counters among three groups.

Explanation / व्याख्या

Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups.

Short-answer revision

Recall the idea before reading the model answer.

REVISION 04.01

Explain Manipulatives / मूर्त शिक्षण सामग्री and give one classroom example.

Model answer: Physical objects learners handle to explore mathematical ideas. Children use base-ten blocks to demonstrate regrouping.

REVISION 04.02

Explain Concrete representation / मूर्त निरूपण and give one classroom example.

Model answer: Showing mathematical relationships with actual objects. A pupil uses counters to demonstrate addition.

REVISION 04.03

Explain Pictorial representation / चित्रात्मक निरूपण and give one classroom example.

Model answer: Showing mathematical relationships with drawings or diagrams. A pupil draws groups of circles to represent multiplication.

REVISION 04.04

Explain Symbolic representation / प्रतीकात्मक निरूपण and give one classroom example.

Model answer: Expressing relationships using mathematical symbols. A pupil records an equal-groups situation as 4 × 3 = 12.

GyanTech Guru Ji

REVISION 04.05

Explain Multiple strategies / अनेक रणनीतियाँ and give one classroom example.

Model answer: Allowing different valid methods for solving a problem. Two pupils solve 18 + 7 by counting on and by making twenty.

REVISION 04.06

Explain Estimation / अनुमान and give one classroom example.

Model answer: Finding a reasonable approximate quantity or result. A child estimates the number of pencils in a jar before counting.

REVISION 04.07

Explain Mental mathematics / मानसिक गणना and give one classroom example.

Model answer: Using flexible number relationships without written standard algorithms. A pupil computes 19 plus 26 as 20 plus 25.

GyanTech Guru Ji

REVISION 04.08

Explain Non-standard measurement / अमानक मापन and give one classroom example.

Model answer: Measuring using informal repeatable units. Children measure a desk using equal paper strips.

REVISION 04.09

Explain Geometric reasoning / ज्यामितीय तर्क and give one classroom example.

Model answer: Identifying and explaining spatial properties and relationships. Pupils sort quadrilaterals according to their sides and angles.

REVISION 04.10

Explain Equal sharing / समान बाँट and give one classroom example.

Model answer: Partitioning a quantity into groups of equal size. Children share 12 counters among three groups.

GyanTech Guru Ji

CHAPTER 05 • 52 MCQs • 5 REVISION PROMPTS

Resources in Mathematics Learning

Important topics, examples, new classroom scenarios and core practice

Important topics & revision notes

Local resources / स्थानीय संसाधन

Materials available in the community used for mathematical exploration.

Classroom example: Children use market price labels for a money comparison task.

Mathematics textbook / गणित पाठ्यपुस्तक

A structured resource whose activities can support mathematical understanding.

Classroom example: A teacher adapts a book exercise into a hands-on activity.

Mathematics laboratory / गणित प्रयोगशाला

A space or organised set of resources for exploring mathematical ideas.

Classroom example: Pupils use geoboards and pattern blocks to investigate shapes.

Number line / संख्या रेखा

A linear representation of ordered numerical positions.

Classroom example: A child shows 8 minus 3 by moving left three steps.

Place-value blocks / स्थानीय मान ब्लॉक

Materials representing units, tens and other base-ten groupings.

Classroom example: A pupil exchanges ten unit cubes for a ten rod.

New classroom-based questions

Apply concepts to realistic teaching decisions.

MCQ 329 • NEW CLASSROOM APPLICATION

Which resource best introduces equal groups in multiplication?

A. A decorative map
B. A spelling chart
C. Counters arranged in equal groups or arrays
D. A ruler without objects

Correct answer / सही उत्तर: C. Counters arranged in equal groups or arrays

Explanation / व्याख्या

Arrays and equal groups connect multiplication to its meaning.

MCQ 330 • NEW CLASSROOM APPLICATION

How should non-standard units be introduced?

A. Guess every length only
B. Start from a random point and leave gaps
C. Use different unit sizes in one measure without noting it
D. Measure the same length with equal-sized units placed without gaps

Correct answer / सही उत्तर: D. Measure the same length with equal-sized units placed without gaps

Explanation / व्याख्या

Consistent units and iteration are foundational measurement ideas.

Core question bank

Ten related practice formats; core concepts recur for revision.

MCQ 331 • CORE PRACTICE · FORM 01

Identify the concept described: Materials available in the community used for mathematical exploration.

A. Curriculum progression / पाठ्यचर्या प्रगति

B. Conservation of number / संख्या संरक्षण

C. Local resources / स्थानीय संसाधन

D. Mental mathematics / मानसिक गणना

Correct answer / सही उत्तर: C. Local resources / स्थानीय संसाधन

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

MCQ 332 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children use market price labels for a money comparison task.

A. Local resources / स्थानीय संसाधन

B. Place value / स्थानीय मान

C. Mathematization / गणितीकरण

D. Equal sharing / समान बाँट

Correct answer / सही उत्तर: A. Local resources / स्थानीय संसाधन

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

MCQ 333 • CORE PRACTICE · FORM 03

Which explanation best defines Local resources / स्थानीय संसाधन?

A. Evaluating mathematics achievement after an instructional period.

B. Expressing ideas through objects, pictures, symbols or language.

C. Materials available in the community used for mathematical exploration.

D. Sequencing related lessons to develop mathematical goals over time.

Correct answer / सही उत्तर: C. Materials available in the community used for mathematical exploration.

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

MCQ 334 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Local resources / स्थानीय संसाधन?

A. After counting five shells, a child answers how many without counting again.

B. Pupils notice that adding two even numbers gives even results and test more cases.

C. A pupil uses counters to demonstrate addition.

D. Children use market price labels for a money comparison task.

Correct answer / सही उत्तर: D. Children use market price labels for a money comparison task.

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

MCQ 335 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Materials available in the community used for mathematical exploration. (2) Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

A. Mathematical problem solving / गणितीय समस्या समाधान | Local resources / स्थानीय संसाधन

B. Pictograph / चित्रालेख | Mathematical problem solving / गणितीय समस्या समाधान

C. Local resources / स्थानीय संसाधन | Subitizing / त्वरित संख्या पहचान

D. Local resources / स्थानीय संसाधन | Mathematical problem solving / गणितीय समस्या समाधान

Correct answer / सही उत्तर: D. Local resources / स्थानीय संसाधन | Mathematical problem solving / गणितीय समस्या समाधान

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task. Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution.

GyanTech Guru Ji

MCQ 336 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children use market price labels for a money comparison task. (2) A child estimates the number of pencils in a jar before counting.

A. Estimation / अनुमान | Local resources / स्थानीय संसाधन

B. Deductive reasoning / निगमनात्मक तर्क| Estimation / अनुमान

C. Local resources / स्थानीय संसाधन | Seriation / क्रमबद्धता

D. Local resources / स्थानीय संसाधन | Estimation / अनुमान

Correct answer / सही उत्तर: D. Local resources / स्थानीय संसाधन | Estimation / अनुमान

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task. Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

GyanTech Guru Ji

MCQ 337 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Local resources / स्थानीय संसाधन and Mathematical problem solving / गणितीय समस्या समाधान.

A. Selecting and evaluating strategies to solve an unfamiliar mathematical situation. | Materials available in the community used for mathematical exploration.

B. Using ongoing evidence to guide further mathematics learning. | Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

C. Materials available in the community used for mathematical exploration. | Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

D. Materials available in the community used for mathematical exploration. | Evaluating mathematics achievement after an instructional period.

Correct answer / सही उत्तर: C. Materials available in the community used for mathematical exploration. | Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task. Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution.

MCQ 338 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Local resources / स्थानीय संसाधन and Performance task / प्रदर्शन कार्य.

A. Children use market price labels for a money comparison task. | A pupil predicts which shape fits after a rotation.

B. Pupils sort quadrilaterals according to their sides and angles. | Pupils measure and compare real classroom objects.

C. Pupils measure and compare real classroom objects. | Children use market price labels for a money comparison task.

D. Children use market price labels for a money comparison task. | Pupils measure and compare real classroom objects.

Correct answer / सही उत्तर: D. Children use market price labels for a money comparison task. | Pupils measure and compare real classroom objects.

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task. Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 339 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Local resources / स्थानीय संसाधन / Mathematical representation / गणितीय निरूपण)

A. One-to-one correspondence / एक-एक संगति → An observable statement of expected mathematical learning.

B. Local resources / स्थानीय संसाधन → Materials available in the community used for mathematical exploration.

C. Mathematical representation / गणितीय निरूपण → Matching exactly one element of one collection to each element of another.

D. Local resources / स्थानीय संसाधन → Expressing ideas through objects, pictures, symbols or language.

Correct answer / सही उत्तर: B. Local resources / स्थानीय संसाधन → Materials available in the community used for mathematical exploration.

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

MCQ 340 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Local resources / स्थानीय संसाधन / Pictograph / चित्रालेख)

A. Local resources / स्थानीय संसाधन → Children use market price labels for a money comparison task.

B. Pictograph / चित्रालेख → Children measure a desk using equal paper strips.

C. Local resources / स्थानीय संसाधन → Each apple icon in a chart stands for two votes.

D. Non-standard measurement / अमानक मापन → Pupils invent questions about quantities shown in a market picture.

Correct answer / सही उत्तर: A. Local resources / स्थानीय संसाधन → Children use market price labels for a money comparison task.

Explanation / व्याख्या

Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

MCQ 341 • CORE PRACTICE · FORM 01

Identify the concept described: A structured resource whose activities can support mathematical understanding.

A. Data handling / आँकड़ा प्रबंधन

B. Concrete representation / मूर्त निरूपण

C. Mathematics textbook / गणित पाठ्यपुस्तक

D. Conservation of number / संख्या संरक्षण

Correct answer / सही उत्तर: C. Mathematics textbook / गणित पाठ्यपुस्तक

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 342 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A teacher adapts a book exercise into a hands-on activity.

A. Mathematization / गणितीकरण

B. Mathematics textbook / गणित पाठ्यपुस्तक

C. Number sense / संख्या बोध

D. Multiple strategies / अनेक रणनीतियाँ

Correct answer / सही उत्तर: B. Mathematics textbook / गणित पाठ्यपुस्तक

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 343 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematics textbook / गणित पाठ्यपुस्तक?

A. Using an ordered sequence of number names consistently when counting.

B. Using flexible number relationships without written standard algorithms.

C. A structured resource whose activities can support mathematical understanding.

D. Drawing a conclusion that follows from accepted premises or rules.

Correct answer / सही उत्तर: C. A structured resource whose activities can support mathematical understanding.

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 344 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematics textbook / गणित पाठ्यपुस्तक?

A. Counting and grouping experiences precede formal multiplication notation.

B. The teacher explains how to improve the alignment of tens and ones.

C. A teacher assesses explanation, strategy and accuracy separately.

D. A teacher adapts a book exercise into a hands-on activity.

Correct answer / सही उत्तर: D. A teacher adapts a book exercise into a hands-on activity.

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 345 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) A structured resource whose activities can support mathematical understanding. (2) Identifying and explaining spatial properties and relationships.

A. Mathematics textbook / गणित पाठ्यपुस्तक | Geometric reasoning / ज्यामितीय तर्क

B. Mathematics textbook / गणित पाठ्यपुस्तक | Mathematical rubric / गणितीय मानदंड तालिका

C. Cardinality / गणन संख्या बोध | Geometric reasoning / ज्यामितीय तर्क

D. Geometric reasoning / ज्यामितीय तर्क| Mathematics textbook / गणित पाठ्यपुस्तक

Correct answer / सही उत्तर: A. Mathematics textbook / गणित पाठ्यपुस्तक | Geometric reasoning / ज्यामितीय तर्क

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity. Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 346 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A teacher adapts a book exercise into a hands-on activity. (2) Children represent three apples and three stones with the same number 3.

A. Qualitative feedback / गुणात्मक प्रतिक्रिया | Abstraction / अमूर्तीकरण

B. Abstraction / अमूर्तीकरण | Mathematics textbook / गणित पाठ्यपुस्तक

C. Mathematics textbook / गणित पाठ्यपुस्तक | Abstraction / अमूर्तीकरण

D. Mathematics textbook / गणित पाठ्यपुस्तक | Mathematical discussion / गणितीय चर्चा

Correct answer / सही उत्तर: C. Mathematics textbook / गणित पाठ्यपुस्तक | Abstraction / अमूर्तीकरण

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity. Abstraction / अमूर्तीकरण: Representing common mathematical properties apart from particular objects. Application: Children represent three apples and three stones with the same number 3.

MCQ 347 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematics textbook / गणित पाठ्यपुस्तक and Problem posing / समस्या निर्माण.

A. Sequencing related lessons to develop mathematical goals over time. | Creating meaningful mathematical questions from a situation.

B. A structured resource whose activities can support mathematical understanding. | Creating meaningful mathematical questions from a situation.

C. Creating meaningful mathematical questions from a situation. | A structured resource whose activities can support mathematical understanding.

D. A structured resource whose activities can support mathematical understanding. | An observable statement of expected mathematical learning.

Correct answer / सही उत्तर: B. A structured resource whose activities can support mathematical understanding. | Creating meaningful mathematical questions from a situation.

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

MCQ 348 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematics textbook / गणित पाठ्यपुस्तक and Task sequencing / कार्य क्रम.

A. A teacher adapts a book exercise into a hands-on activity. | The teacher explains how to improve the alignment of tens and ones.

B. A teacher adapts a book exercise into a hands-on activity. | A lesson moves from equal groups to drawings and multiplication notation.

C. A lesson moves from equal groups to drawings and multiplication notation. | A teacher adapts a book exercise into a hands-on activity.

D. A pupil writes 7 > 5 to express a comparison. | A lesson moves from equal groups to drawings and multiplication notation.

Correct answer / सही उत्तर: B. A teacher adapts a book exercise into a hands-on activity. | A lesson moves from equal groups to drawings and multiplication notation.

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity. Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 349 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematics textbook / गणित पाठ्यपुस्तक / Conservation of number / संख्या संरक्षण)

A. Symbolic representation / प्रतीकात्मक निरूपण → Collecting, organising and interpreting information.

B. Mathematics textbook / गणित पाठ्यपुस्तक → Understanding that number remains unchanged when objects are rearranged without adding or removing any.

C. Conservation of number / संख्या संरक्षण → Expressing relationships using mathematical symbols.

D. Mathematics textbook / गणित पाठ्यपुस्तक → A structured resource whose activities can support mathematical understanding.

Correct answer / सही उत्तर: D. Mathematics textbook / गणित पाठ्यपुस्तक → A structured resource whose activities can support mathematical understanding.

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 350 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematics textbook / गणित पाठ्यपुस्तक / Mathematical pattern / गणितीय पैटर्न)

A. Mathematical pattern / गणितीय पैटर्न → A pupil can compare two lengths using the same unit.

B. Mathematics textbook / गणित पाठ्यपुस्तक → Children extend a repeating red-blue-blue sequence.

C. Learning outcome / अधिगम प्रतिफल → A pupil computes 19 plus 26 as 20 plus 25.

D. Mathematics textbook / गणित पाठ्यपुस्तक → A teacher adapts a book exercise into a hands-on activity.

Correct answer / सही उत्तर: D. Mathematics textbook / गणित पाठ्यपुस्तक → A teacher adapts a book exercise into a hands-on activity.

Explanation / व्याख्या

Mathematics textbook / गणित पाठ्यपुस्तक: A structured resource whose activities can support mathematical understanding. Application: A teacher adapts a book exercise into a hands-on activity.

MCQ 351 • CORE PRACTICE · FORM 01

Identify the concept described: A space or organised set of resources for exploring mathematical ideas.

A. Mathematics laboratory / गणित प्रयोगशाला

B. Multiple strategies / अनेक रणनीतियाँ

C. Task sequencing / कार्य क्रम

D. Equal sharing / समान बाँट

Correct answer / सही उत्तर: A. Mathematics laboratory / गणित प्रयोगशाला

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes.

MCQ 352 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Pupils use geoboards and pattern blocks to investigate shapes.

A. Mathematics laboratory / गणित प्रयोगशाला

B. Mathematical representation / गणितीय निरूपण

C. Problem posing / समस्या निर्माण

D. Mathematical rubric / गणितीय मानदंड तालिका

Correct answer / सही उत्तर: A. Mathematics laboratory / गणित प्रयोगशाला

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes.

MCQ 353 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematics laboratory / गणित प्रयोगशाला?

A. Drawing a conclusion that follows from accepted premises or rules.

B. Sequencing related lessons to develop mathematical goals over time.

C. Showing mathematical relationships with drawings or diagrams.

D. A space or organised set of resources for exploring mathematical ideas.

Correct answer / सही उत्तर: D. A space or organised set of resources for exploring mathematical ideas.

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes.

MCQ 354 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematics laboratory / गणित प्रयोगशाला?

A. A teacher plans several connected lessons on measurement.

B. Pupils use geoboards and pattern blocks to investigate shapes.

C. A pupil explains why 49 plus 21 is close to 70 before calculating.

D. Children find different pairs of whole numbers whose sum is ten.

Correct answer / सही उत्तर: B. Pupils use geoboards and pattern blocks to investigate shapes.

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes.

MCQ 355 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) A space or organised set of resources for exploring mathematical ideas. (2) Investigating particular errors or gaps in mathematical understanding.

A. Number sense / संख्या बोध | Diagnostic assessment / निदानात्मक आकलन

B. Diagnostic assessment / निदानात्मक आकलन | Mathematics laboratory / गणित प्रयोगशाला

C. Mathematics laboratory / गणित प्रयोगशाला | Mental mathematics / मानसिक गणना

D. Mathematics laboratory / गणित प्रयोगशाला | Diagnostic assessment / निदानात्मक आकलन

Correct answer / सही उत्तर: D. Mathematics laboratory / गणित प्रयोगशाला | Diagnostic assessment / निदानात्मक आकलन

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes. Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

GyanTech Guru Ji

MCQ 356 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Pupils use geoboards and pattern blocks to investigate shapes. (2) A teacher changes grouping after observing pupils' fraction strategies.

A. Mathematics laboratory / गणित प्रयोगशाला | Data handling / आँकड़ा प्रबंधन

B. Deductive reasoning / निगमनात्मक तर्क| Formative assessment / निर्माणात्मक आकलन

C. Formative assessment / निर्माणात्मक आकलन | Mathematics laboratory / गणित प्रयोगशाला

D. Mathematics laboratory / गणित प्रयोगशाला | Formative assessment / निर्माणात्मक आकलन

Correct answer / सही उत्तर: D. Mathematics laboratory / गणित प्रयोगशाला | Formative assessment / निर्माणात्मक आकलन

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes. Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

MCQ 357 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematics laboratory / गणित प्रयोगशाला and Summative assessment / संकलनात्मक आकलन.

A. Evaluating mathematics achievement after an instructional period. | A space or organised set of resources for exploring mathematical ideas.

B. A space or organised set of resources for exploring mathematical ideas. | Drawing a conclusion that follows from accepted premises or rules.

C. A space or organised set of resources for exploring mathematical ideas. | Evaluating mathematics achievement after an instructional period.

D. Finding a reasonable approximate quantity or result. | Evaluating mathematics achievement after an instructional period.

Correct answer / सही उत्तर: C. A space or organised set of resources for exploring mathematical ideas. | Evaluating mathematics achievement after an instructional period.

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes. Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

MCQ 358 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematics laboratory / गणित प्रयोगशाला and Subitizing / त्वरित संख्या पहचान.

A. Pupils use geoboards and pattern blocks to investigate shapes. | A child explains why two differently arranged shapes have equal area.

B. Pupils use geoboards and pattern blocks to investigate shapes. | A child immediately identifies three dots on a card.

C. A child immediately identifies three dots on a card. | Pupils use geoboards and pattern blocks to investigate shapes.

D. Children extend a repeating red-blue-blue sequence. | A child immediately identifies three dots on a card.

Correct answer / सही उत्तर: B. Pupils use geoboards and pattern blocks to investigate shapes. | A child immediately identifies three dots on a card.

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes. Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

MCQ 359 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematics laboratory / गणित प्रयोगशाला / Mathematical competency / गणितीय दक्षता)

A. Manipulatives / मूर्त शिक्षण सामग्री → A task requiring demonstration of mathematical knowledge in action.

B. Mathematics laboratory / गणित प्रयोगशाला → A space or organised set of resources for exploring mathematical ideas.

C. Mathematical competency / गणितीय दक्षता → Physical objects learners handle to explore mathematical ideas.

D. Mathematics laboratory / गणित प्रयोगशाला → Applying mathematical understanding and processes in meaningful situations.

Correct answer / सही उत्तर: B. Mathematics laboratory / गणित प्रयोगशाला → A space or organised set of resources for exploring mathematical ideas.

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes.

MCQ 360 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematics laboratory / गणित प्रयोगशाला / Mathematical competency / गणितीय दक्षता)

A. Mathematical discussion / गणितीय चर्चा → Children share 12 counters among three groups.

B. Mathematics laboratory / गणित प्रयोगशाला → A learner chooses an appropriate unit to measure a desk.

C. Mathematics laboratory / गणित प्रयोगशाला → Pupils use geoboards and pattern blocks to investigate shapes.

D. Mathematical competency / गणितीय दक्षता → Pairs compare two methods for adding 37 and 28.

Correct answer / सही उत्तर: C. Mathematics laboratory / गणित प्रयोगशाला → Pupils use geoboards and pattern blocks to investigate shapes.

Explanation / व्याख्या

Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes.

MCQ 361 • CORE PRACTICE · FORM 01

Identify the concept described: A linear representation of ordered numerical positions.

A. Estimation / अनुमान

B. Conservation of number / संख्या संरक्षण

C. Number line / संख्या रेखा

D. Formative assessment / निर्माणात्मक आकलन

Correct answer / सही उत्तर: C. Number line / संख्या रेखा

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps.

MCQ 362 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A child shows 8 minus 3 by moving left three steps.

A. Number line / संख्या रेखा

B. Mathematical discussion / गणितीय चर्चा

C. Qualitative feedback / गुणात्मक प्रतिक्रिया

D. One-to-one correspondence / एक-एक संगति

Correct answer / सही उत्तर: A. Number line / संख्या रेखा

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps.

MCQ 363 • CORE PRACTICE · FORM 03

Which explanation best defines Number line / संख्या रेखा?

A. Creating meaningful mathematical questions from a situation.

B. Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

C. A linear representation of ordered numerical positions.

D. A task requiring demonstration of mathematical knowledge in action.

Correct answer / सही उत्तर: C. A linear representation of ordered numerical positions.

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps.

MCQ 364 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Number line / संख्या रेखा?

A. A child explains why two differently arranged shapes have equal area.

B. A child shows 8 minus 3 by moving left three steps.

C. Pupils invent questions about quantities shown in a market picture.

D. A pupil explains why 49 plus 21 is close to 70 before calculating.

Correct answer / सही उत्तर: B. A child shows 8 minus 3 by moving left three steps.

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps.

MCQ 365 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) A linear representation of ordered numerical positions. (2) Investigating particular errors or gaps in mathematical understanding.

A. Unit planning / इकाई योजना | Diagnostic assessment / निदानात्मक आकलन

B. Number line / संख्या रेखा | Inductive reasoning / आगमनात्मक तर्क

C. Diagnostic assessment / निदानात्मक आकलन | Number line / संख्या रेखा

D. Number line / संख्या रेखा | Diagnostic assessment / निदानात्मक आकलन

Correct answer / सही उत्तर: D. Number line / संख्या रेखा | Diagnostic assessment / निदानात्मक आकलन

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps. Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

GyanTech Guru Ji

MCQ 366 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A child shows 8 minus 3 by moving left three steps. (2) A pupil writes 7 > 5 to express a comparison.

A. Mathematical language / गणितीय भाषा | Number line / संख्या रेखा

B. Seriation / क्रमबद्धता | Mathematical language / गणितीय भाषा

C. Number line / संख्या रेखा | Number sense / संख्या बोध

D. Number line / संख्या रेखा | Mathematical language / गणितीय भाषा

Correct answer / सही उत्तर: D. Number line / संख्या रेखा | Mathematical language / गणितीय भाषा

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps. Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

GyanTech Guru Ji

MCQ 367 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Number line / संख्या रेखा and Inductive reasoning / आगमनात्मक तर्क

A. A linear representation of ordered numerical positions. | Forming a tentative generalisation from observed cases.

B. Understanding that number remains unchanged when objects are rearranged without adding or removing any. | Forming a tentative generalisation from observed cases.

C. A linear representation of ordered numerical positions. | A task allowing multiple valid solutions or approaches.

D. Forming a tentative generalisation from observed cases. | A linear representation of ordered numerical positions.

Correct answer / सही उत्तर: A. A linear representation of ordered numerical positions. | Forming a tentative generalisation from observed cases.

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps. Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 368 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Number line / संख्या रेखा and Mathematical rubric / गणितीय मानदंड तालिका.

A. A child shows 8 minus 3 by moving left three steps. | Children use base-ten blocks to demonstrate regrouping.

B. A child shows 8 minus 3 by moving left three steps. | A teacher assesses explanation, strategy and accuracy separately.

C. A teacher assesses explanation, strategy and accuracy separately. | A child shows 8 minus 3 by moving left three steps.

D. A pupil computes 19 plus 26 as 20 plus 25. | A teacher assesses explanation, strategy and accuracy separately.

Correct answer / सही उत्तर: B. A child shows 8 minus 3 by moving left three steps. | A teacher assesses explanation, strategy and accuracy separately.

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps. Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

MCQ 369 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Number line / संख्या रेखा / Summative assessment / संकलनात्मक आकलन)

A. Summative assessment / संकलनात्मक आकलन → Forming a tentative generalisation from observed cases.

B. Inductive reasoning / आगमनात्मक तर्क→ An observable statement of expected mathematical learning.

C. Number line / संख्या रेखा → A linear representation of ordered numerical positions.

D. Number line / संख्या रेखा → Evaluating mathematics achievement after an instructional period.

Correct answer / सही उत्तर: C. Number line / संख्या रेखा → A linear representation of ordered numerical positions.

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps.

GyanTech

MCQ 370 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Number line / संख्या रेखा / Pictograph / चित्रालेख)

A. Number line / संख्या रेखा → Each apple icon in a chart stands for two votes.

B. Number line / संख्या रेखा → A child shows 8 minus 3 by moving left three steps.

C. Diagnostic assessment / निदानात्मक आकलन → A pupil can compare two lengths using the same unit.

D. Pictograph / चित्रालेख → A teacher asks how a child obtained 402 when adding 23 and 19.

Correct answer / सही उत्तर: B. Number line / संख्या रेखा → A child shows 8 minus 3 by moving left three steps.

Explanation / व्याख्या

Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps.

MCQ 371 • CORE PRACTICE · FORM 01

Identify the concept described: Materials representing units, tens and other base-ten groupings.

A. Place-value blocks / स्थानीय मान ब्लॉक

B. Number sense / संख्या बोध

C. Diagnostic assessment / निदानात्मक आकलन

D. Spatial thinking / स्थानिक चिंतन

Correct answer / सही उत्तर: A. Place-value blocks / स्थानीय मान ब्लॉक

Explanation / व्याख्या

Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

MCQ 372 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil exchanges ten unit cubes for a ten rod.

A. Data handling / आँकड़ा प्रबंधन
B. Counting principle / गणना सिद्धांत
C. Mathematization / गणितीकरण
D. Place-value blocks / स्थानीय मान ब्लॉक

Correct answer / सही उत्तर: D. Place-value blocks / स्थानीय मान ब्लॉक

Explanation / व्याख्या
Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

MCQ 373 • CORE PRACTICE · FORM 03

Which explanation best defines Place-value blocks / स्थानीय मान ब्लॉक?

A. Identifying and explaining spatial properties and relationships.
B. Materials representing units, tens and other base-ten groupings.
C. Criteria describing quality of mathematical reasoning and representation.
D. Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

Correct answer / सही उत्तर: B. Materials representing units, tens and other base-ten groupings.

Explanation / व्याख्या
Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

GyanTech Guru Ji

MCQ 374 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Place-value blocks / स्थानीय मान ब्लॉक?

A. A child recognises that spreading five counters does not create more counters.

B. A pupil draws equal groups to explain a multiplication expression.

C. A pupil exchanges ten unit cubes for a ten rod.

D. Children share 12 counters among three groups.

Correct answer / सही उत्तर: C. A pupil exchanges ten unit cubes for a ten rod.

Explanation / व्याख्या

Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

MCQ 375 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Materials representing units, tens and other base-ten groupings. (2) Evaluating mathematics achievement after an instructional period.

A. Summative assessment / संकलनात्मक आकलन | Place-value blocks / स्थानीय मान ब्लॉक

B. Place-value blocks / स्थानीय मान ब्लॉक | Summative assessment / संकलनात्मक आकलन

C. Place-value blocks / स्थानीय मान ब्लॉक | Geometric reasoning / ज्यामितीय तर्क

D. Equal sharing / समान बाँट | Summative assessment / संकलनात्मक आकलन

Correct answer / सही उत्तर: B. Place-value blocks / स्थानीय मान ब्लॉक | Summative assessment / संकलनात्मक आकलन

Explanation / व्याख्या

Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod. Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

GyanTech Guru Ji

MCQ 376 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil exchanges ten unit cubes for a ten rod. (2) The 4 in forty-two represents four tens.

A. Place value / स्थानीय मान | Place-value blocks / स्थानीय मान ब्लॉक

B. Place-value blocks / स्थानीय मान ब्लॉक | Place value / स्थानीय मान

C. Manipulatives / मूर्त शिक्षण सामग्री | Place value / स्थानीय मान

D. Place-value blocks / स्थानीय मान ब्लॉक | Mathematical pattern / गणितीय पैटर्न

Correct answer / सही उत्तर: B. Place-value blocks / स्थानीय मान ब्लॉक | Place value / स्थानीय मान

Explanation / व्याख्या

Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod. Place value / स्थानीय मान: The value a digit has because of its position in a numeral. Application: The 4 in forty-two represents four tens.

GyanTech Guru Ji

MCQ 377 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Place-value blocks / स्थानीय मान ब्लॉक and Error analysis / त्रुटि विश्लेषण.

A. Expressing relationships using mathematical symbols. | Examining learner mistakes to infer their underlying reasoning.

B. Materials representing units, tens and other base-ten groupings. | Using ongoing evidence to guide further mathematics learning.

C. Examining learner mistakes to infer their underlying reasoning. | Materials representing units, tens and other base-ten groupings.

D. Materials representing units, tens and other base-ten groupings. | Examining learner mistakes to infer their underlying reasoning.

Correct answer / सही उत्तर: D. Materials representing units, tens and other base-ten groupings. | Examining learner mistakes to infer their underlying reasoning.

Explanation / व्याख्या

Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod. Error analysis / त्रुटि विश्लेषण: Examining learner mistakes to infer their underlying reasoning. Application: A teacher asks why a child wrote 305 for thirty-five before planning support.

MCQ 378 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Place-value blocks / स्थानीय मान ब्लॉक and Conservation of number / संख्या संरक्षण.

A. A child recognises that spreading five counters does not create more counters. | A pupil exchanges ten unit cubes for a ten rod.

B. A pupil exchanges ten unit cubes for a ten rod. | A child recognises that spreading five counters does not create more counters.

C. Children find different pairs of whole numbers whose sum is ten. | A child recognises that spreading five counters does not create more counters.

D. A pupil exchanges ten unit cubes for a ten rod. | Pupils notice that adding two even numbers gives even results and test more cases.

Correct answer / सही उत्तर: B. A pupil exchanges ten unit cubes for a ten rod. | A child recognises that spreading five counters does not create more counters.

Explanation / व्याख्या

Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod. Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters.

MCQ 379 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Place-value blocks / स्थानीय मान ब्लॉक / Number sense / संख्या बोध)

A. Place-value blocks / स्थानीय मान ब्लॉक → Flexible understanding of numbers, magnitudes and relationships.

B. Number sense / संख्या बोध → Expressing or analysing real situations using mathematical ideas.

C. Place-value blocks / स्थानीय मान ब्लॉक → Materials representing units, tens and other base-ten groupings.

D. Mathematization / गणितीकरण → Collecting, organising and interpreting information.

Correct answer / सही उत्तर: C. Place-value blocks / स्थानीय मान ब्लॉक → Materials representing units, tens and other base-ten groupings.

Explanation / व्याख्या

Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

GyanTech

MCQ 380 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Place-value blocks / स्थानीय मान ब्लॉक / Data handling / आँकड़ा प्रबंधन)

A. Place-value blocks / स्थानीय मान ब्लॉक → A pupil exchanges ten unit cubes for a ten rod.

B. Data handling / आँकड़ा प्रबंधन → Pupils measure and compare real classroom objects.

C. Performance task / प्रदर्शन कार्य → Children represent three apples and three stones with the same number 3.

D. Place-value blocks / स्थानीय मान ब्लॉक → Children tally classmates' favourite fruits and compare frequencies.

Correct answer / सही उत्तर: A. Place-value blocks / स्थानीय मान ब्लॉक → A pupil exchanges ten unit cubes for a ten rod.

Explanation / व्याख्या

Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

Short-answer revision

Recall the idea before reading the model answer.

REVISION 05.01

Explain Local resources / स्थानीय संसाधन and give one classroom example.

Model answer: Materials available in the community used for mathematical exploration. Children use market price labels for a money comparison task.

REVISION 05.02

Explain Mathematics textbook / गणित पाठ्यपुस्तक and give one classroom example.

Model answer: A structured resource whose activities can support mathematical understanding. A teacher adapts a book exercise into a hands-on activity.

REVISION 05.03

Explain Mathematics laboratory / गणित प्रयोगशाला and give one classroom example.

Model answer: A space or organised set of resources for exploring mathematical ideas. Pupils use geoboards and pattern blocks to investigate shapes.

REVISION 05.04

Explain Number line / संख्या रेखा and give one classroom example.

Model answer: A linear representation of ordered numerical positions. A child shows 8 minus 3 by moving left three steps.

GyanTech Guru Ji

REVISION 05.05

Explain Place-value blocks / स्थानीय मान ब्लॉक and give one classroom example.

Model answer: Materials representing units, tens and other base-ten groupings. A pupil exchanges ten unit cubes for a ten rod.

GyanTech Guru Ji

CHAPTER 06 • 42 MCQs • 4 REVISION PROMPTS

Planning in Mathematics

Important topics, examples, new classroom scenarios and core practice

Important topics & revision notes

Mathematical competency / गणितीय दक्षता

Applying mathematical understanding and processes in meaningful situations.

Classroom example: A learner chooses an appropriate unit to measure a desk.

Unit planning / इकाई योजना

Sequencing related lessons to develop mathematical goals over time.

Classroom example: A teacher plans several connected lessons on measurement.

Learning outcome / अधिगम प्रतिफल

An observable statement of expected mathematical learning.

Classroom example: A pupil can compare two lengths using the same unit.

Task sequencing / कार्य क्रम

Arranging mathematical tasks from accessible experiences toward greater complexity.

Classroom example: A lesson moves from equal groups to drawings and multiplication notation.

New classroom-based questions

Apply concepts to realistic teaching decisions.

MCQ 381 • NEW CLASSROOM APPLICATION

Which is a measurable mathematics outcome?

A. Pupils compare two two-digit numbers and explain their reasoning

B. Pupils will love every problem forever

C. The room has charts

D. Teacher writes five pages

Correct answer / सही उत्तर: A. Pupils compare two two-digit numbers and explain their reasoning

Explanation / व्याख्या

Observable mathematical action supports aligned assessment.

MCQ 382 • NEW CLASSROOM APPLICATION

How can a lesson on addition support mixed readiness?

A. Require all learners to use one speed

B. Offer counters, drawings and symbolic tasks with flexible support

C. Remove tasks from weaker pupils

D. Ignore prior knowledge

Correct answer / सही उत्तर: B. Offer counters, drawings and symbolic tasks with flexible support

Explanation / व्याख्या

Differentiation supports shared conceptual goals through varied pathways.

Core question bank

Ten related practice formats; core concepts recur for revision.

MCQ 383 • CORE PRACTICE · FORM 01

Identify the concept described: Applying mathematical understanding and processes in meaningful situations.

A. Mathematical competency / गणितीय दक्षता

B. Seriation / क्रमबद्धता

C. Problem posing / समस्या निर्माण

D. Mathematics textbook / गणित पाठ्यपुस्तक

Correct answer / सही उत्तर: A. Mathematical competency / गणितीय दक्षता

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

MCQ 384 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A learner chooses an appropriate unit to measure a desk.

A. Symbolic representation / प्रतीकात्मक निरूपण

B. Concrete representation / मूर्त निरूपण

C. Mathematical competency / गणितीय दक्षता

D. Mathematical representation / गणितीय निरूपण

Correct answer / सही उत्तर: C. Mathematical competency / गणितीय दक्षता

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

MCQ 385 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematical competency / गणितीय दक्षता?

A. A task allowing multiple valid solutions or approaches.

B. Drawing a conclusion that follows from accepted premises or rules.

C. Using ongoing evidence to guide further mathematics learning.

D. Applying mathematical understanding and processes in meaningful situations.

Correct answer / सही उत्तर: D. Applying mathematical understanding and processes in meaningful situations.

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

MCQ 386 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematical competency / गणितीय दक्षता?

A. A learner chooses an appropriate unit to measure a desk.

B. A child recognises that spreading five counters does not create more counters.

C. Children represent a sharing situation using division.

D. Pupils measure and compare real classroom objects.

Correct answer / सही उत्तर: A. A learner chooses an appropriate unit to measure a desk.

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

MCQ 387 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Applying mathematical understanding and processes in meaningful situations. (2) Using ongoing evidence to guide further mathematics learning.

A. Mathematical competency / गणितीय दक्षता | Curriculum progression / पाठ्यचर्या प्रगति

B. Mathematical competency / गणितीय दक्षता | Formative assessment / निर्माणात्मक आकलन

C. Formative assessment / निर्माणात्मक आकलन | Mathematical competency / गणितीय दक्षता

D. One-to-one correspondence / एक-एक संगति | Formative assessment / निर्माणात्मक आकलन

Correct answer / सही उत्तर: B. Mathematical competency / गणितीय दक्षता | Formative assessment / निर्माणात्मक आकलन

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk. Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

MCQ 388 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A learner chooses an appropriate unit to measure a desk. (2) Each apple icon in a chart stands for two votes.

A. Formative assessment / निर्माणात्मक आकलन | Pictograph / चित्रालेख

B. Mathematical competency / गणितीय दक्षता | Qualitative feedback / गुणात्मक प्रतिक्रिया

C. Pictograph / चित्रालेख | Mathematical competency / गणितीय दक्षता

D. Mathematical competency / गणितीय दक्षता | Pictograph / चित्रालेख

Correct answer / सही उत्तर: D. Mathematical competency / गणितीय दक्षता | Pictograph / चित्रालेख

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk. Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes.

MCQ 389 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematical competency / गणितीय दक्षता and Performance task / प्रदर्शन कार्य.

A. Applying mathematical understanding and processes in meaningful situations. | Collecting, organising and interpreting information.

B. Applying mathematical understanding and processes in meaningful situations. | A task requiring demonstration of mathematical knowledge in action.

C. Forming a tentative generalisation from observed cases. | A task requiring demonstration of mathematical knowledge in action.

D. A task requiring demonstration of mathematical knowledge in action. | Applying mathematical understanding and processes in meaningful situations.

Correct answer / सही उत्तर: B. Applying mathematical understanding and processes in meaningful situations. | A task requiring demonstration of mathematical knowledge in action.

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk. Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 390 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematical competency / गणितीय दक्षता and Pictograph / चित्रालेख.

A. A learner chooses an appropriate unit to measure a desk. | Each apple icon in a chart stands for two votes.

B. A learner chooses an appropriate unit to measure a desk. | A pupil computes 19 plus 26 as 20 plus 25.

C. A teacher asks how a child obtained 402 when adding 23 and 19. | Each apple icon in a chart stands for two votes.

D. Each apple icon in a chart stands for two votes. | A learner chooses an appropriate unit to measure a desk.

Correct answer / सही उत्तर: A. A learner chooses an appropriate unit to measure a desk. | Each apple icon in a chart stands for two votes.

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk. Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes.

MCQ 391 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematical competency / गणितीय दक्षता / Number line / संख्या रेखा)

A. Number line / संख्या रेखा → Sharing, comparing and justifying ways of solving a problem.

B. Mathematical discussion / गणितीय चर्चा → The value a digit has because of its position in a numeral.

C. Mathematical competency / गणितीय दक्षता → A linear representation of ordered numerical positions.

D. Mathematical competency / गणितीय दक्षता → Applying mathematical understanding and processes in meaningful situations.

Correct answer / सही उत्तर: D. Mathematical competency / गणितीय दक्षता → Applying mathematical understanding and processes in meaningful situations.

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

GyanTech

MCQ 392 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematical competency / गणितीय दक्षता / Local resources / स्थानीय संसाधन)

A. Mathematical argument / गणितीय तर्क प्रस्तुति → Pupils invent questions about quantities shown in a market picture.

B. Local resources / स्थानीय संसाधन → A child explains why two differently arranged shapes have equal area.

C. Mathematical competency / गणितीय दक्षता → A learner chooses an appropriate unit to measure a desk.

D. Mathematical competency / गणितीय दक्षता → Children use market price labels for a money comparison task.

Correct answer / सही उत्तर: C. Mathematical competency / गणितीय दक्षता → A learner chooses an appropriate unit to measure a desk.

Explanation / व्याख्या

Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

MCQ 393 • CORE PRACTICE · FORM 01

Identify the concept described: Sequencing related lessons to develop mathematical goals over time.

A. Place-value blocks / स्थानीय मान ब्लॉक

B. Conservation of number / संख्या संरक्षण

C. Mathematics laboratory / गणित प्रयोगशाला

D. Unit planning / इकाई योजना

Correct answer / सही उत्तर: D. Unit planning / इकाई योजना

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time. Application: A teacher plans several connected lessons on measurement.

MCQ 394 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A teacher plans several connected lessons on measurement.

A. Mathematization / गणितीकरण

B. Unit planning / इकाई योजना

C. Place value / स्थानीय मान

D. Seriation / क्रमबद्धता

Correct answer / सही उत्तर: B. Unit planning / इकाई योजना

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time.
Application: A teacher plans several connected lessons on measurement.

MCQ 395 • CORE PRACTICE · FORM 03

Which explanation best defines Unit planning / इकाई योजना?

A. Using flexible number relationships without written standard algorithms.

B. Sequencing related lessons to develop mathematical goals over time.

C. A structured resource whose activities can support mathematical understanding.

D. A linear representation of ordered numerical positions.

Correct answer / सही उत्तर: B. Sequencing related lessons to develop mathematical goals over time.

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time.
Application: A teacher plans several connected lessons on measurement.

MCQ 396 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Unit planning / इकाई योजना?

A. A pupil computes 19 plus 26 as 20 plus 25.

B. A final unit task checks understanding of measurement concepts.

C. Two pupils solve 18 + 7 by counting on and by making twenty.

D. A teacher plans several connected lessons on measurement.

Correct answer / सही उत्तर: D. A teacher plans several connected lessons on measurement.

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time. Application: A teacher plans several connected lessons on measurement.

MCQ 397 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Sequencing related lessons to develop mathematical goals over time. (2) Recognising a small quantity without counting each item individually.

A. Unit planning / इकाई योजना | Symbolic representation / प्रतीकात्मक निरूपण

B. Mathematical discussion / गणितीय चर्चा | Subitizing / त्वरित संख्या पहचान

C. Unit planning / इकाई योजना | Subitizing / त्वरित संख्या पहचान

D. Subitizing / त्वरित संख्या पहचान | Unit planning / इकाई योजना

Correct answer / सही उत्तर: C. Unit planning / इकाई योजना | Subitizing / त्वरित संख्या पहचान

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time. Application: A teacher plans several connected lessons on measurement. Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

GyanTech Guru Ji

MCQ 398 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A teacher plans several connected lessons on measurement. (2) Pupils invent questions about quantities shown in a market picture.

A. Error analysis / त्रुटि विश्लेषण | Problem posing / समस्या निर्माण

B. Unit planning / इकाई योजना | Problem posing / समस्या निर्माण

C. Unit planning / इकाई योजना | Diagnostic assessment / निदानात्मक आकलन

D. Problem posing / समस्या निर्माण | Unit planning / इकाई योजना

Correct answer / सही उत्तर: B. Unit planning / इकाई योजना | Problem posing / समस्या निर्माण

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time. Application: A teacher plans several connected lessons on measurement. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

GyanTech Guru Ji

MCQ 399 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Unit planning / इकाई योजना and Problem posing / समस्या निर्माण.

A. Sequencing related lessons to develop mathematical goals over time. | A task allowing multiple valid solutions or approaches.

B. Sequencing related lessons to develop mathematical goals over time. | Creating meaningful mathematical questions from a situation.

C. Creating meaningful mathematical questions from a situation. | Sequencing related lessons to develop mathematical goals over time.

D. Using ongoing evidence to guide further mathematics learning. | Creating meaningful mathematical questions from a situation.

Correct answer / सही उत्तर: B. Sequencing related lessons to develop mathematical goals over time. | Creating meaningful mathematical questions from a situation.

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time. Application: A teacher plans several connected lessons on measurement. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

MCQ 400 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Unit planning / इकाई योजना and Geometric reasoning / ज्यामितीय तर्क

A. A teacher plans several connected lessons on measurement. | Pupils sort quadrilaterals according to their sides and angles.

B. Pairs compare two methods for adding 37 and 28. | Pupils sort quadrilaterals according to their sides and angles.

C. A teacher plans several connected lessons on measurement. | Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

D. Pupils sort quadrilaterals according to their sides and angles. | A teacher plans several connected lessons on measurement.

Correct answer / सही उत्तर: A. A teacher plans several connected lessons on measurement. | Pupils sort quadrilaterals according to their sides and angles.

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time. Application: A teacher plans several connected lessons on measurement. Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 401 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Unit planning / इकाई योजना / Mathematization / गणितीकरण)

A. Spatial thinking / स्थानिक चिंतन → Collecting, organising and interpreting information.

B. Unit planning / इकाई योजना → Sequencing related lessons to develop mathematical goals over time.

C. Mathematization / गणितीकरण → Reasoning about shapes, positions and relationships in space.

D. Unit planning / इकाई योजना → Expressing or analysing real situations using mathematical ideas.

Correct answer / सही उत्तर: B. Unit planning / इकाई योजना → Sequencing related lessons to develop mathematical goals over time.

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time.
Application: A teacher plans several connected lessons on measurement.

MCQ 402 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Unit planning / इकाई योजना / Open-ended task / मुक्त उत्तर कार्य)

A. Error analysis / त्रुटि विश्लेषण → Children arrange sticks from shortest to longest.

B. Unit planning / इकाई योजना → A teacher plans several connected lessons on measurement.

C. Unit planning / इकाई योजना → Children find different pairs of whole numbers whose sum is ten.

D. Open-ended task / मुक्त उत्तर कार्य → A teacher asks why a child wrote 305 for thirty-five before planning support.

Correct answer / सही उत्तर: B. Unit planning / इकाई योजना → A teacher plans several connected lessons on measurement.

Explanation / व्याख्या

Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time.
Application: A teacher plans several connected lessons on measurement.

MCQ 403 • CORE PRACTICE · FORM 01

Identify the concept described: An observable statement of expected mathematical learning.

A. Learning outcome / अधिगम प्रतिफल

B. Mental mathematics / मानसिक गणना

C. Mathematical rubric / गणितीय मानदंड तालिका

D. Error analysis / त्रुटि विश्लेषण

Correct answer / सही उत्तर: A. Learning outcome / अधिगम प्रतिफल

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning.
Application: A pupil can compare two lengths using the same unit.

MCQ 404 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A pupil can compare two lengths using the same unit.

A. Mathematical discussion / गणितीय चर्चा

B. Mathematical rubric / गणितीय मानदंड तालिका

C. Learning outcome / अधिगम प्रतिफल

D. Mathematical pattern / गणितीय पैटर्न

Correct answer / सही उत्तर: C. Learning outcome / अधिगम प्रतिफल

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning.
Application: A pupil can compare two lengths using the same unit.

MCQ 405 • CORE PRACTICE · FORM 03

Which explanation best defines Learning outcome / अधिगम प्रतिफल?

A. An observable statement of expected mathematical learning.

B. Using ongoing evidence to guide further mathematics learning.

C. Representing common mathematical properties apart from particular objects.

D. Understanding that number remains unchanged when objects are rearranged without adding or removing any.

Correct answer / सही उत्तर: A. An observable statement of expected mathematical learning.

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning.
Application: A pupil can compare two lengths using the same unit.

MCQ 406 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Learning outcome / अधिगम प्रतिफल?

A. A pupil writes 7 > 5 to express a comparison.

B. A final unit task checks understanding of measurement concepts.

C. Children use base-ten blocks to demonstrate regrouping.

D. A pupil can compare two lengths using the same unit.

Correct answer / सही उत्तर: D. A pupil can compare two lengths using the same unit.

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning. Application: A pupil can compare two lengths using the same unit.

MCQ 407 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) An observable statement of expected mathematical learning. (2) Forming a tentative generalisation from observed cases.

A. Curriculum progression / पाठ्यचर्या प्रगति | Inductive reasoning / आगमनात्मक तर्क

B. Learning outcome / अधिगम प्रतिफल | Summative assessment / संकलनात्मक आकलन

C. Learning outcome / अधिगम प्रतिफल | Inductive reasoning / आगमनात्मक तर्क

D. Inductive reasoning / आगमनात्मक तर्क| Learning outcome / अधिगम प्रतिफल

Correct answer / सही उत्तर: C. Learning outcome / अधिगम प्रतिफल | Inductive reasoning / आगमनात्मक तर्क

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning. Application: A pupil can compare two lengths using the same unit. Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

GyanTech Guru Ji

MCQ 408 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A pupil can compare two lengths using the same unit. (2) Pupils use geoboards and pattern blocks to investigate shapes.

A. Learning outcome / अधिगम प्रतिफल | Mathematics laboratory / गणित प्रयोगशाला

B. Mathematics laboratory / गणित प्रयोगशाला | Learning outcome / अधिगम प्रतिफल

C. Multiple strategies / अनेक रणनीतियाँ | Mathematics laboratory / गणित प्रयोगशाला

D. Learning outcome / अधिगम प्रतिफल | Conservation of number / संख्या संरक्षण

Correct answer / सही उत्तर: A. Learning outcome / अधिगम प्रतिफल | Mathematics laboratory / गणित प्रयोगशाला

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning. Application: A pupil can compare two lengths using the same unit. Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes.

GyanTech Guru Ji

MCQ 409 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Learning outcome / अधिगम प्रतिफल and Mental mathematics / मानसिक गणना.

A. Expressing ideas through objects, pictures, symbols or language. | Using flexible number relationships without written standard algorithms.

B. An observable statement of expected mathematical learning. | Using flexible number relationships without written standard algorithms.

C. An observable statement of expected mathematical learning. | A task requiring demonstration of mathematical knowledge in action.

D. Using flexible number relationships without written standard algorithms. | An observable statement of expected mathematical learning.

Correct answer / सही उत्तर: B. An observable statement of expected mathematical learning. | Using flexible number relationships without written standard algorithms.

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning. Application: A pupil can compare two lengths using the same unit. Mental mathematics / मानसिक गणना: Using flexible number relationships without written standard algorithms. Application: A pupil computes 19 plus 26 as 20 plus 25.

MCQ 410 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Learning outcome / अधिगम प्रतिफल and Mathematics laboratory / गणित प्रयोगशाला.

A. A pupil can compare two lengths using the same unit. | A child estimates the number of pencils in a jar before counting.

B. Children represent a sharing situation using division. | Pupils use geoboards and pattern blocks to investigate shapes.

C. A pupil can compare two lengths using the same unit. | Pupils use geoboards and pattern blocks to investigate shapes.

D. Pupils use geoboards and pattern blocks to investigate shapes. | A pupil can compare two lengths using the same unit.

Correct answer / सही उत्तर: C. A pupil can compare two lengths using the same unit. | Pupils use geoboards and pattern blocks to investigate shapes.

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning. Application: A pupil can compare two lengths using the same unit. Mathematics laboratory / गणित प्रयोगशाला: A space or organised set of resources for exploring mathematical ideas. Application: Pupils use geoboards and pattern blocks to investigate shapes.

MCQ 411 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Learning outcome / अधिगम प्रतिफल / Non-standard measurement / अमानक मापन)

A. Learning outcome / अधिगम प्रतिफल → Measuring using informal repeatable units.

B. Learning outcome / अधिगम प्रतिफल → An observable statement of expected mathematical learning.

C. Seriation / क्रमबद्धता → Evaluating mathematics achievement after an instructional period.

D. Non-standard measurement / अमानक मापन → Arranging items in order by a measurable property.

Correct answer / सही उत्तर: B. Learning outcome / अधिगम प्रतिफल → An observable statement of expected mathematical learning.

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning.
Application: A pupil can compare two lengths using the same unit.

GyanTech Guru Ji

MCQ 412 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Learning outcome / अधिगम प्रतिफल / Concrete representation / मूर्त निरूपण)

A. Concrete representation / मूर्त निरूपण → Pupils notice that adding two even numbers gives even results and test more cases.

B. Learning outcome / अधिगम प्रतिफल → A pupil can compare two lengths using the same unit.

C. Inductive reasoning / आगमनात्मक तर्क→ A pupil writes 7 > 5 to express a comparison.

D. Learning outcome / अधिगम प्रतिफल → A pupil uses counters to demonstrate addition.

Correct answer / सही उत्तर: B. Learning outcome / अधिगम प्रतिफल → A pupil can compare two lengths using the same unit.

Explanation / व्याख्या

Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning. Application: A pupil can compare two lengths using the same unit.

MCQ 413 • CORE PRACTICE · FORM 01

Identify the concept described: Arranging mathematical tasks from accessible experiences toward greater complexity.

A. Task sequencing / कार्य क्रम

B. Data handling / आँकड़ा प्रबंधन

C. Concrete representation / मूर्त निरूपण

D. Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: A. Task sequencing / कार्य क्रम

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 414 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A lesson moves from equal groups to drawings and multiplication notation.

A. Task sequencing / कार्य क्रम

B. Place value / स्थानीय मान

C. Non-standard measurement / अमानक मापन

D. Conservation of number / संख्या संरक्षण

Correct answer / सही उत्तर: A. Task sequencing / कार्य क्रम

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 415 • CORE PRACTICE · FORM 03

Which explanation best defines Task sequencing / कार्य क्रम?

A. Understanding that number remains unchanged when objects are rearranged without adding or removing any.

B. Using ongoing evidence to guide further mathematics learning.

C. Showing mathematical relationships with drawings or diagrams.

D. Arranging mathematical tasks from accessible experiences toward greater complexity.

Correct answer / सही उत्तर: D. Arranging mathematical tasks from accessible experiences toward greater complexity.

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 416 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Task sequencing / कार्य क्रम?

A. A lesson moves from equal groups to drawings and multiplication notation.

B. After counting five shells, a child answers how many without counting again.

C. A pupil computes 19 plus 26 as 20 plus 25.

D. Children measure a desk using equal paper strips.

Correct answer / सही उत्तर: A. A lesson moves from equal groups to drawings and multiplication notation.

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

GyanTech Guru Ji

MCQ 417 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Arranging mathematical tasks from accessible experiences toward greater complexity. (2) Expressing ideas through objects, pictures, symbols or language.

A. Task sequencing / कार्य क्रम | Mathematical representation / गणितीय निरूपण

B. Task sequencing / कार्य क्रम | Mathematical problem solving / गणितीय समस्या समाधान

C. Mathematical representation / गणितीय निरूपण | Task sequencing / कार्य क्रम

D. Non-standard measurement / अमानक मापन | Mathematical representation / गणितीय निरूपण

Correct answer / सही उत्तर: A. Task sequencing / कार्य क्रम | Mathematical representation / गणितीय निरूपण

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation. Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

MCQ 418 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A lesson moves from equal groups to drawings and multiplication notation. (2) A child immediately identifies three dots on a card.

A. Task sequencing / कार्य क्रम | Subitizing / त्वरित संख्या पहचान

B. Subitizing / त्वरित संख्या पहचान | Task sequencing / कार्य क्रम

C. Mathematics laboratory / गणित प्रयोगशाला | Subitizing / त्वरित संख्या पहचान

D. Task sequencing / कार्य क्रम | Spatial thinking / स्थानिक चिंतन

Correct answer / सही उत्तर: A. Task sequencing / कार्य क्रम | Subitizing / त्वरित संख्या पहचान

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation. Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

GyanTech Guru Ji

MCQ 419 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Task sequencing / कार्य क्रम and Place-value blocks / स्थानीय मान ब्लॉक.

A. Arranging mathematical tasks from accessible experiences toward greater complexity. | Expressing ideas through objects, pictures, symbols or language.

B. Using flexible number relationships without written standard algorithms. | Materials representing units, tens and other base-ten groupings.

C. Arranging mathematical tasks from accessible experiences toward greater complexity. | Materials representing units, tens and other base-ten groupings.

D. Materials representing units, tens and other base-ten groupings. | Arranging mathematical tasks from accessible experiences toward greater complexity.

Correct answer / सही उत्तर: C. Arranging mathematical tasks from accessible experiences toward greater complexity. | Materials representing units, tens and other base-ten groupings.

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation. Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

MCQ 420 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Task sequencing / कार्य क्रम and Performance task / प्रदर्शन कार्य.

A. A lesson moves from equal groups to drawings and multiplication notation. | Pupils measure and compare real classroom objects.

B. Pupils measure and compare real classroom objects. | A lesson moves from equal groups to drawings and multiplication notation.

C. A lesson moves from equal groups to drawings and multiplication notation. | Counting and grouping experiences precede formal multiplication notation.

D. A child shows 8 minus 3 by moving left three steps. | Pupils measure and compare real classroom objects.

Correct answer / सही उत्तर: A. A lesson moves from equal groups to drawings and multiplication notation. | Pupils measure and compare real classroom objects.

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation. Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 421 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Task sequencing / कार्य क्रम / Summative assessment / संकलनात्मक आकलन)

A. Conservation of number / संख्या संरक्षण → Physical objects learners handle to explore mathematical ideas.

B. Task sequencing / कार्य क्रम → Evaluating mathematics achievement after an instructional period.

C. Summative assessment / संकलनात्मक आकलन → Understanding that number remains unchanged when objects are rearranged without adding or removing any.

D. Task sequencing / कार्य क्रम → Arranging mathematical tasks from accessible experiences toward greater complexity.

Correct answer / सही उत्तर: D. Task sequencing / कार्य क्रम → Arranging mathematical tasks from accessible experiences toward greater complexity.

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 422 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Task sequencing / कार्य क्रम / Mathematical rubric / गणितीय मानदंड तालिका)

A. Mathematical rubric / गणितीय मानदंड तालिका → Pupils notice that adding two even numbers gives even results and test more cases.

B. Task sequencing / कार्य क्रम → A teacher assesses explanation, strategy and accuracy separately.

C. Task sequencing / कार्य क्रम → A lesson moves from equal groups to drawings and multiplication notation.

D. Inductive reasoning / आगमनात्मक तर्क→ A pupil exchanges ten unit cubes for a ten rod.

Correct answer / सही उत्तर: C. Task sequencing / कार्य क्रम → A lesson moves from equal groups to drawings and multiplication notation.

Explanation / व्याख्या

Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

Short-answer revision

Recall the idea before reading the model answer.

REVISION 06.01

Explain Mathematical competency / गणितीय दक्षता and give one classroom example.

Model answer: Applying mathematical understanding and processes in meaningful situations. A learner chooses an appropriate unit to measure a desk.

REVISION 06.02

Explain Unit planning / इकाई योजना and give one classroom example.

Model answer: Sequencing related lessons to develop mathematical goals over time. A teacher plans several connected lessons on measurement.

REVISION 06.03

Explain Learning outcome / अधिगम प्रतिफल and give one classroom example.

Model answer: An observable statement of expected mathematical learning. A pupil can compare two lengths using the same unit.

REVISION 06.04

Explain Task sequencing / कार्य क्रम and give one classroom example.

Model answer: Arranging mathematical tasks from accessible experiences toward greater complexity. A lesson moves from equal groups to drawings and multiplication notation.

GyanTech Guru Ji

CHAPTER 07 • 72 MCQs • 7 REVISION PROMPTS

Assessment in Mathematics

Important topics, examples, new classroom scenarios and core practice

Important topics & revision notes

Formative assessment / निर्माणात्मक आकलन

Using ongoing evidence to guide further mathematics learning.

Classroom example: A teacher changes grouping after observing pupils' fraction strategies.

Summative assessment / संकलनात्मक आकलन

Evaluating mathematics achievement after an instructional period.

Classroom example: A final unit task checks understanding of measurement concepts.

Qualitative feedback / गुणात्मक प्रतिक्रिया

Descriptive information about strengths and next steps in learning.

Classroom example: The teacher explains how to improve the alignment of tens and ones.

Open-ended task / मुक्त उत्तर कार्य

A task allowing multiple valid solutions or approaches.

Classroom example: Children find different pairs of whole numbers whose sum is ten.

Diagnostic assessment / निदानात्मक आकलन

Investigating particular errors or gaps in mathematical understanding.

Classroom example: A teacher asks how a child obtained 402 when adding 23 and 19.

Performance task / प्रदर्शन कार्य

A task requiring demonstration of mathematical knowledge in action.

Classroom example: Pupils measure and compare real classroom objects.

Mathematical rubric / गणितीय मानदंड तालिका

Criteria describing quality of mathematical reasoning and representation.

Classroom example: A teacher assesses explanation, strategy and accuracy separately.

New classroom-based questions

Apply concepts to realistic teaching decisions.

MCQ 423 • NEW CLASSROOM APPLICATION

A pupil repeatedly reverses the numerator and denominator. What evidence is most useful?

A. Ask the pupil to represent and explain a fraction using equal parts

B. Record attendance only

C. Repeat the same score without feedback

D. Test unrelated geometry facts

Correct answer / सही उत्तर: A. Ask the pupil to represent and explain a fraction using equal parts

Explanation / व्याख्या

A diagnostic task reveals the reasoning behind the error.

GyanTech Guru Ji

MCQ 424 • NEW CLASSROOM APPLICATION

Which question reveals more than procedural recall?

A. Copy 19 and 21

B. Repeat the answer 40 ten times

C. Explain whether 19 + 21 equals 20 + 20 without standard addition

D. State the colour of the numeral

Correct answer / सही उत्तर: C. Explain whether 19 + 21 equals 20 + 20 without standard addition

Explanation / व्याख्या

Reasoning about compensation demonstrates conceptual understanding.

Core question bank

Ten related practice formats; core concepts recur for revision.

MCQ 425 • CORE PRACTICE · FORM 01

Identify the concept described: Using ongoing evidence to guide further mathematics learning.

A. Task sequencing / कार्य क्रम

B. Formative assessment / निर्माणात्मक आकलन

C. Number sense / संख्या बोध

D. Pictorial representation / चित्रात्मक निरूपण

Correct answer / सही उत्तर: B. Formative assessment / निर्माणात्मक आकलन

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

GyanTech Guru Ji

MCQ 426 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A teacher changes grouping after observing pupils' fraction strategies.

A. Error analysis / त्रुटि विश्लेषण

B. Mathematical argument / गणितीय तर्क प्रस्तुति

C. Mathematical discussion / गणितीय चर्चा

D. Formative assessment / निर्माणात्मक आकलन

Correct answer / सही उत्तर: D. Formative assessment / निर्माणात्मक आकलन

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

MCQ 427 • CORE PRACTICE · FORM 03

Which explanation best defines Formative assessment / निर्माणात्मक आकलन?

A. Examining learner mistakes to infer their underlying reasoning.

B. Using ongoing evidence to guide further mathematics learning.

C. Creating meaningful mathematical questions from a situation.

D. Sequencing related lessons to develop mathematical goals over time.

Correct answer / सही उत्तर: B. Using ongoing evidence to guide further mathematics learning.

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

GyanTech Guru Ji

MCQ 428 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Formative assessment / निर्माणात्मक आकलन?

A. A teacher changes grouping after observing pupils' fraction strategies.

B. A child explains why two differently arranged shapes have equal area.

C. After counting five shells, a child answers how many without counting again.

D. Pupils invent questions about quantities shown in a market picture.

Correct answer / सही उत्तर: A. A teacher changes grouping after observing pupils' fraction strategies.

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

MCQ 429 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Using ongoing evidence to guide further mathematics learning. (2) Arranging items in order by a measurable property.

A. Seriation / क्रमबद्धता | Formative assessment / निर्माणात्मक आकलन

B. Formative assessment / निर्माणात्मक आकलन | Estimation / अनुमान

C. Multiple strategies / अनेक रणनीतियाँ | Seriation / क्रमबद्धता

D. Formative assessment / निर्माणात्मक आकलन | Seriation / क्रमबद्धता

Correct answer / सही उत्तर: D. Formative assessment / निर्माणात्मक आकलन | Seriation / क्रमबद्धता

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies. Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest.

MCQ 430 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A teacher changes grouping after observing pupils' fraction strategies. (2) Each apple icon in a chart stands for two votes.

A. Pictograph / चित्रालेख | Formative assessment / निर्माणात्मक आकलन

B. Formative assessment / निर्माणात्मक आकलन | Concrete representation / मूर्त निरूपण

C. Subitizing / त्वरित संख्या पहचान | Pictograph / चित्रालेख

D. Formative assessment / निर्माणात्मक आकलन | Pictograph / चित्रालेख

Correct answer / सही उत्तर: D. Formative assessment / निर्माणात्मक आकलन | Pictograph / चित्रालेख

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies. Pictograph / चित्रालेख: Representing data with pictures or symbols and a key when needed. Application: Each apple icon in a chart stands for two votes.

GyanTech Guru Ji

MCQ 431 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Formative assessment / निर्माणात्मक आकलन and Learning outcome / अधिगम प्रतिफल.

A. Using ongoing evidence to guide further mathematics learning. | An observable statement of expected mathematical learning.

B. Sharing, comparing and justifying ways of solving a problem. | An observable statement of expected mathematical learning.

C. An observable statement of expected mathematical learning. | Using ongoing evidence to guide further mathematics learning.

D. Using ongoing evidence to guide further mathematics learning. | Expressing ideas through objects, pictures, symbols or language.

Correct answer / सही उत्तर: A. Using ongoing evidence to guide further mathematics learning. | An observable statement of expected mathematical learning.

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies. Learning outcome / अधिगम प्रतिफल: An observable statement of expected mathematical learning. Application: A pupil can compare two lengths using the same unit.

MCQ 432 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Formative assessment / निर्माणात्मक आकलन and Inductive reasoning / आगमनात्मक तर्क

A. A teacher changes grouping after observing pupils' fraction strategies. | Children arrange sticks from shortest to longest.

B. Each apple icon in a chart stands for two votes. | Pupils notice that adding two even numbers gives even results and test more cases.

C. A teacher changes grouping after observing pupils' fraction strategies. | Pupils notice that adding two even numbers gives even results and test more cases.

D. Pupils notice that adding two even numbers gives even results and test more cases. | A teacher changes grouping after observing pupils' fraction strategies.

Correct answer / सही उत्तर: C. A teacher changes grouping after observing pupils' fraction strategies. | Pupils notice that adding two even numbers gives even results and test more cases.

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies. Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 433 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Formative assessment / निर्माणात्मक आकलन / Equal sharing / समान बाँट)

A. Formative assessment / निर्माणात्मक आकलन → Partitioning a quantity into groups of equal size.

B. Equal sharing / समान बाँट → Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

C. Formative assessment / निर्माणात्मक आकलन → Using ongoing evidence to guide further mathematics learning.

D. Mathematical problem solving / गणितीय समस्या समाधान → A linear representation of ordered numerical positions.

Correct answer / सही उत्तर: C. Formative assessment / निर्माणात्मक आकलन → Using ongoing evidence to guide further mathematics learning.

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

MCQ 434 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Formative assessment / निर्माणात्मक आकलन / Mental mathematics / मानसिक गणना)

A. Formative assessment / निर्माणात्मक आकलन → A pupil computes 19 plus 26 as 20 plus 25.

B. Learning outcome / अधिगम प्रतिफल → A pupil draws equal groups to explain a multiplication expression.

C. Formative assessment / निर्माणात्मक आकलन → A teacher changes grouping after observing pupils' fraction strategies.

D. Mental mathematics / मानसिक गणना → A pupil can compare two lengths using the same unit.

Correct answer / सही उत्तर: C. Formative assessment / निर्माणात्मक आकलन → A teacher changes grouping after observing pupils' fraction strategies.

Explanation / व्याख्या

Formative assessment / निर्माणात्मक आकलन: Using ongoing evidence to guide further mathematics learning. Application: A teacher changes grouping after observing pupils' fraction strategies.

MCQ 435 • CORE PRACTICE · FORM 01

Identify the concept described: Evaluating mathematics achievement after an instructional period.

A. Summative assessment / संकलनात्मक आकलन

B. Mathematical representation / गणितीय निरूपण

C. Concrete representation / मूर्त निरूपण

D. Error analysis / त्रुटि विश्लेषण

Correct answer / सही उत्तर: A. Summative assessment / संकलनात्मक आकलन

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

MCQ 436 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A final unit task checks understanding of measurement concepts.

A. Mathematical competency / गणितीय दक्षता

B. Conservation of number / संख्या संरक्षण

C. Concrete representation / मूर्त निरूपण

D. Summative assessment / संकलनात्मक आकलन

Correct answer / सही उत्तर: D. Summative assessment / संकलनात्मक आकलन

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

MCQ 437 • CORE PRACTICE · FORM 03

Which explanation best defines Summative assessment / संकलनात्मक आकलन?

A. Using precise terms and symbols to communicate mathematical meaning.

B. Evaluating mathematics achievement after an instructional period.

C. Allowing different valid methods for solving a problem.

D. Giving reasons to support a mathematical claim.

Correct answer / सही उत्तर: B. Evaluating mathematics achievement after an instructional period.

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

MCQ 438 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Summative assessment / संकलनात्मक आकलन?

A. A final unit task checks understanding of measurement concepts.

B. A child immediately identifies three dots on a card.

C. Children share 12 counters among three groups.

D. Each apple icon in a chart stands for two votes.

Correct answer / सही उत्तर: A. A final unit task checks understanding of measurement concepts.

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

GyanTech Guru Ji

MCQ 439 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Evaluating mathematics achievement after an instructional period. (2) Forming a tentative generalisation from observed cases.

A. Summative assessment / संकलनात्मक आकलन | Local resources / स्थानीय संसाधन

B. Inductive reasoning / आगमनात्मक तर्क| Summative assessment / संकलनात्मक आकलन

C. One-to-one correspondence / एक-एक संगति | Inductive reasoning / आगमनात्मक तर्क

D. Summative assessment / संकलनात्मक आकलन | Inductive reasoning / आगमनात्मक तर्क

Correct answer / सही उत्तर: D. Summative assessment / संकलनात्मक आकलन | Inductive reasoning / आगमनात्मक तर्क

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts. Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 440 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A final unit task checks understanding of measurement concepts. (2) Children share 12 counters among three groups.

A. Curriculum progression / पाठ्यचर्या प्रगति | Equal sharing / समान बाँट

B. Equal sharing / समान बाँट | Summative assessment / संकलनात्मक आकलन

C. Summative assessment / संकलनात्मक आकलन | Equal sharing / समान बाँट

D. Summative assessment / संकलनात्मक आकलन | Task sequencing / कार्य क्रम

Correct answer / सही उत्तर: C. Summative assessment / संकलनात्मक आकलन | Equal sharing / समान बाँट

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts. Equal sharing / समान बाँट: Partitioning a quantity into groups of equal size. Application: Children share 12 counters among three groups.

GyanTech Guru Ji

MCQ 441 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Summative assessment / संकलनात्मक आकलन and Mathematical pattern / गणितीय पैटर्न.

A. Evaluating mathematics achievement after an instructional period. | A regularity described by a relationship or rule.

B. Reasoning about shapes, positions and relationships in space. | A regularity described by a relationship or rule.

C. A regularity described by a relationship or rule. | Evaluating mathematics achievement after an instructional period.

D. Evaluating mathematics achievement after an instructional period. | Partitioning a quantity into groups of equal size.

Correct answer / सही उत्तर: A. Evaluating mathematics achievement after an instructional period. | A regularity described by a relationship or rule.

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts. Mathematical pattern / गणितीय पैटर्न: A regularity described by a relationship or rule. Application: Children extend a repeating red-blue-blue sequence.

MCQ 442 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Summative assessment / संकलनात्मक आकलन and Mathematical representation / गणितीय निरूपण.

A. A final unit task checks understanding of measurement concepts. | A pupil draws equal groups to explain a multiplication expression.

B. After counting five shells, a child answers how many without counting again. | A pupil draws equal groups to explain a multiplication expression.

C. A final unit task checks understanding of measurement concepts. | A pupil uses counters to demonstrate addition.

D. A pupil draws equal groups to explain a multiplication expression. | A final unit task checks understanding of measurement concepts.

Correct answer / सही उत्तर: A. A final unit task checks understanding of measurement concepts. | A pupil draws equal groups to explain a multiplication expression.

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts. Mathematical representation / गणितीय निरूपण: Expressing ideas through objects, pictures, symbols or language. Application: A pupil draws equal groups to explain a multiplication expression.

MCQ 443 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Summative assessment / संकलनात्मक आकलन / Mathematization / गणितीकरण)

A. Mathematical competency / गणितीय दक्षता → Partitioning a quantity into groups of equal size.

B. Summative assessment / संकलनात्मक आकलन → Expressing or analysing real situations using mathematical ideas.

C. Mathematization / गणितीकरण → Applying mathematical understanding and processes in meaningful situations.

D. Summative assessment / संकलनात्मक आकलन → Evaluating mathematics achievement after an instructional period.

Correct answer / सही उत्तर: D. Summative assessment / संकलनात्मक आकलन → Evaluating mathematics achievement after an instructional period.

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

MCQ 444 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Summative assessment / संकलनात्मक आकलन / Mathematical representation / गणितीय निरूपण)

A. Mathematical representation / गणितीय निरूपण → A child estimates the number of pencils in a jar before counting.

B. Estimation / अनुमान → Children use base-ten blocks to demonstrate regrouping.

C. Summative assessment / संकलनात्मक आकलन → A final unit task checks understanding of measurement concepts.

D. Summative assessment / संकलनात्मक आकलन → A pupil draws equal groups to explain a multiplication expression.

Correct answer / सही उत्तर: C. Summative assessment / संकलनात्मक आकलन → A final unit task checks understanding of measurement concepts.

Explanation / व्याख्या

Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

MCQ 445 • CORE PRACTICE · FORM 01

Identify the concept described: Descriptive information about strengths and next steps in learning.

A. Task sequencing / कार्य क्रम

B. Qualitative feedback / गुणात्मक प्रतिक्रिया

C. Mental mathematics / मानसिक गणना

D. Seriation / क्रमबद्धता

Correct answer / सही उत्तर: B. Qualitative feedback / गुणात्मक प्रतिक्रिया

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

MCQ 446 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? The teacher explains how to improve the alignment of tens and ones.

A. Qualitative feedback / गुणात्मक प्रतिक्रिया

B. Mathematics laboratory / गणित प्रयोगशाला

C. Curriculum progression / पाठ्यचर्या प्रगति

D. Counting principle / गणना सिद्धांत

Correct answer / सही उत्तर: A. Qualitative feedback / गुणात्मक प्रतिक्रिया

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

MCQ 447 • CORE PRACTICE · FORM 03

Which explanation best defines Qualitative feedback / गुणात्मक प्रतिक्रिया?

A. Measuring using informal repeatable units.

B. Giving reasons to support a mathematical claim.

C. Applying mathematical understanding and processes in meaningful situations.

D. Descriptive information about strengths and next steps in learning.

Correct answer / सही उत्तर: D. Descriptive information about strengths and next steps in learning.

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

GyanTech Guru Ji

MCQ 448 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Qualitative feedback / गुणात्मक प्रतिक्रिया?

A. Children use market price labels for a money comparison task.

B. Children represent a sharing situation using division.

C. The teacher explains how to improve the alignment of tens and ones.

D. Children arrange sticks from shortest to longest.

Correct answer / सही उत्तर: C. The teacher explains how to improve the alignment of tens and ones.

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

MCQ 449 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Descriptive information about strengths and next steps in learning. (2) Understanding that number remains unchanged when objects are rearranged without adding or removing any.

A. Place-value blocks / स्थानीय मान ब्लॉक | Conservation of number / संख्या संरक्षण

B. Qualitative feedback / गुणात्मक प्रतिक्रिया | Conservation of number / संख्या संरक्षण

C. Conservation of number / संख्या संरक्षण | Qualitative feedback / गुणात्मक प्रतिक्रिया

D. Qualitative feedback / गुणात्मक प्रतिक्रिया | Mathematical representation / गणितीय निरूपण

Correct answer / सही उत्तर: B. Qualitative feedback / गुणात्मक प्रतिक्रिया | Conservation of number / संख्या संरक्षण

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones. Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters.

MCQ 450 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) The teacher explains how to improve the alignment of tens and ones. (2) A child immediately identifies three dots on a card.

A. Qualitative feedback / गुणात्मक प्रतिक्रिया | Number line / संख्या रेखा

B. Non-standard measurement / अमानक मापन | Subitizing / त्वरित संख्या पहचान

C. Subitizing / त्वरित संख्या पहचान | Qualitative feedback / गुणात्मक प्रतिक्रिया

D. Qualitative feedback / गुणात्मक प्रतिक्रिया | Subitizing / त्वरित संख्या पहचान

Correct answer / सही उत्तर: D. Qualitative feedback / गुणात्मक प्रतिक्रिया | Subitizing / त्वरित संख्या पहचान

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones. Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

GyanTech Guru Ji

MCQ 451 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Qualitative feedback / गुणात्मक प्रतिक्रिया and Task sequencing / कार्य क्रम.

A. Creating meaningful mathematical questions from a situation. | Arranging mathematical tasks from accessible experiences toward greater complexity.

B. Descriptive information about strengths and next steps in learning. | Physical objects learners handle to explore mathematical ideas.

C. Descriptive information about strengths and next steps in learning. | Arranging mathematical tasks from accessible experiences toward greater complexity.

D. Arranging mathematical tasks from accessible experiences toward greater complexity. | Descriptive information about strengths and next steps in learning.

Correct answer / सही उत्तर: C. Descriptive information about strengths and next steps in learning. | Arranging mathematical tasks from accessible experiences toward greater complexity.

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones. Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 452 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Qualitative feedback / गुणात्मक प्रतिक्रिया and Spatial thinking / स्थानिक चिंतन.

A. A pupil predicts which shape fits after a rotation. | The teacher explains how to improve the alignment of tens and ones.

B. The teacher explains how to improve the alignment of tens and ones. | Pupils sort quadrilaterals according to their sides and angles.

C. The teacher explains how to improve the alignment of tens and ones. | A pupil predicts which shape fits after a rotation.

D. Pupils invent questions about quantities shown in a market picture. | A pupil predicts which shape fits after a rotation.

Correct answer / सही उत्तर: C. The teacher explains how to improve the alignment of tens and ones. | A pupil predicts which shape fits after a rotation.

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones. Spatial thinking / स्थानिक चिंतन: Reasoning about shapes, positions and relationships in space. Application: A pupil predicts which shape fits after a rotation.

MCQ 453 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Qualitative feedback / गुणात्मक प्रतिक्रिया / Concrete representation / मूर्त निरूपण)

A. Qualitative feedback / गुणात्मक प्रतिक्रिया → Showing mathematical relationships with actual objects.

B. Number line / संख्या रेखा → Representing common mathematical properties apart from particular objects.

C. Concrete representation / मूर्त निरूपण → A linear representation of ordered numerical positions.

D. Qualitative feedback / गुणात्मक प्रतिक्रिया → Descriptive information about strengths and next steps in learning.

Correct answer / सही उत्तर: D. Qualitative feedback / गुणात्मक प्रतिक्रिया → Descriptive information about strengths and next steps in learning.

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

MCQ 454 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Qualitative feedback / गुणात्मक प्रतिक्रिया / Pictorial representation / चित्रात्मक निरूपण)

A. Qualitative feedback / गुणात्मक प्रतिक्रिया → The teacher explains how to improve the alignment of tens and ones.

B. Place value / स्थानीय मान → A teacher plans several connected lessons on measurement.

C. Qualitative feedback / गुणात्मक प्रतिक्रिया → A pupil draws groups of circles to represent multiplication.

D. Pictorial representation / चित्रात्मक निरूपण → The 4 in forty-two represents four tens.

Correct answer / सही उत्तर: A. Qualitative feedback / गुणात्मक प्रतिक्रिया → The teacher explains how to improve the alignment of tens and ones.

Explanation / व्याख्या

Qualitative feedback / गुणात्मक प्रतिक्रिया: Descriptive information about strengths and next steps in learning. Application: The teacher explains how to improve the alignment of tens and ones.

MCQ 455 • CORE PRACTICE · FORM 01

Identify the concept described: A task allowing multiple valid solutions or approaches.

A. Open-ended task / मुक्त उत्तर कार्य

B. Mathematical argument / गणितीय तर्क प्रस्तुति

C. Place-value blocks / स्थानीय मान ब्लॉक

D. Spatial thinking / स्थानिक चिंतन

Correct answer / सही उत्तर: A. Open-ended task / मुक्त उत्तर कार्य

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches. Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 456 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Children find different pairs of whole numbers whose sum is ten.

A. Open-ended task / मुक्त उत्तर कार्य

B. Symbolic representation / प्रतीकात्मक निरूपण

C. Spatial thinking / स्थानिक चिंतन

D. Unit planning / इकाई योजना

Correct answer / सही उत्तर: A. Open-ended task / मुक्त उत्तर कार्य

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches.
Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 457 • CORE PRACTICE · FORM 03

Which explanation best defines Open-ended task / मुक्त उत्तर कार्य?

A. A task allowing multiple valid solutions or approaches.

B. Representing common mathematical properties apart from particular objects.

C. Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

D. Finding a reasonable approximate quantity or result.

Correct answer / सही उत्तर: A. A task allowing multiple valid solutions or approaches.

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches.
Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 458 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Open-ended task / मुक्त उत्तर कार्य?

A. A pupil records an equal-groups situation as 4 × 3 = 12.

B. Children arrange sticks from shortest to longest.

C. Children find different pairs of whole numbers whose sum is ten.

D. Pupils use geoboards and pattern blocks to investigate shapes.

Correct answer / सही उत्तर: C. Children find different pairs of whole numbers whose sum is ten.

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches.
Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 459 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) A task allowing multiple valid solutions or approaches. (2) Identifying and explaining spatial properties and relationships.

A. Mathematical argument / गणितीय तर्क प्रस्तुति | Geometric reasoning / ज्यामितीय तर्क

B. Open-ended task / मुक्त उत्तर कार्य | Geometric reasoning / ज्यामितीय तर्क

C. Open-ended task / मुक्त उत्तर कार्य | Mathematical language / गणितीय भाषा

D. Geometric reasoning / ज्यामितीय तर्क| Open-ended task / मुक्त उत्तर कार्य

Correct answer / सही उत्तर: B. Open-ended task / मुक्त उत्तर कार्य | Geometric reasoning / ज्यामितीय तर्क

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches.
Application: Children find different pairs of whole numbers whose sum is ten. Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships.
Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 460 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Children find different pairs of whole numbers whose sum is ten. (2) Pupils invent questions about quantities shown in a market picture.

A. Subitizing / त्वरित संख्या पहचान | Problem posing / समस्या निर्माण

B. Problem posing / समस्या निर्माण | Open-ended task / मुक्त उत्तर कार्य

C. Open-ended task / मुक्त उत्तर कार्य | Mathematics textbook / गणित पाठ्यपुस्तक

D. Open-ended task / मुक्त उत्तर कार्य | Problem posing / समस्या निर्माण

Correct answer / सही उत्तर: D. Open-ended task / मुक्त उत्तर कार्य | Problem posing / समस्या निर्माण

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches. Application: Children find different pairs of whole numbers whose sum is ten. Problem posing / समस्या निर्माण: Creating meaningful mathematical questions from a situation. Application: Pupils invent questions about quantities shown in a market picture.

GyanTech

MCQ 461 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Open-ended task / मुक्त उत्तर कार्य and Mathematical discussion / गणितीय चर्चा.

A. A task allowing multiple valid solutions or approaches. | Sharing, comparing and justifying ways of solving a problem.

B. Sharing, comparing and justifying ways of solving a problem. | A task allowing multiple valid solutions or approaches.

C. Selecting and evaluating strategies to solve an unfamiliar mathematical situation. | Sharing, comparing and justifying ways of solving a problem.

D. A task allowing multiple valid solutions or approaches. | Using precise terms and symbols to communicate mathematical meaning.

Correct answer / सही उत्तर: A. A task allowing multiple valid solutions or approaches. | Sharing, comparing and justifying ways of solving a problem.

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches. Application: Children find different pairs of whole numbers whose sum is ten. Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 462 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Open-ended task / मुक्त उत्तर कार्य and Task sequencing / कार्य क्रम.

A. A child gives one pencil to each pupil to check if there are enough. | A lesson moves from equal groups to drawings and multiplication notation.

B. Children find different pairs of whole numbers whose sum is ten. | A lesson moves from equal groups to drawings and multiplication notation.

C. A lesson moves from equal groups to drawings and multiplication notation. | Children find different pairs of whole numbers whose sum is ten.

D. Children find different pairs of whole numbers whose sum is ten. | Pupils sort quadrilaterals according to their sides and angles.

Correct answer / सही उत्तर: B. Children find different pairs of whole numbers whose sum is ten. | A lesson moves from equal groups to drawings and multiplication notation.

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches. Application: Children find different pairs of whole numbers whose sum is ten. Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 463 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Open-ended task / मुक्त उत्तर कार्य / Learning outcome / अधिगम प्रतिफल)

A. Open-ended task / मुक्त उत्तर कार्य → An observable statement of expected mathematical learning.

B. Inductive reasoning / आगमनात्मक तर्क→ Physical objects learners handle to explore mathematical ideas.

C. Open-ended task / मुक्त उत्तर कार्य → A task allowing multiple valid solutions or approaches.

D. Learning outcome / अधिगम प्रतिफल → Forming a tentative generalisation from observed cases.

Correct answer / सही उत्तर: C. Open-ended task / मुक्त उत्तर कार्य → A task allowing multiple valid solutions or approaches.

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches.
Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 464 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Open-ended task / मुक्त उत्तर कार्य / Task sequencing / कार्य क्रम)

A. Open-ended task / मुक्त उत्तर कार्य → Children find different pairs of whole numbers whose sum is ten.

B. Local resources / स्थानीय संसाधन → Children use base-ten blocks to demonstrate regrouping.

C. Open-ended task / मुक्त उत्तर कार्य → A lesson moves from equal groups to drawings and multiplication notation.

D. Task sequencing / कार्य क्रम → Children use market price labels for a money comparison task.

Correct answer / सही उत्तर: A. Open-ended task / मुक्त उत्तर कार्य → Children find different pairs of whole numbers whose sum is ten.

Explanation / व्याख्या

Open-ended task / मुक्त उत्तर कार्य: A task allowing multiple valid solutions or approaches. Application: Children find different pairs of whole numbers whose sum is ten.

MCQ 465 • CORE PRACTICE · FORM 01

Identify the concept described: Investigating particular errors or gaps in mathematical understanding.

A. Diagnostic assessment / निदानात्मक आकलन

B. Curriculum progression / पाठ्यचर्या प्रगति

C. Inductive reasoning / आगमनात्मक तर्क

D. Mathematical competency / गणितीय दक्षता

Correct answer / सही उत्तर: A. Diagnostic assessment / निदानात्मक आकलन

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

MCQ 466 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A teacher asks how a child obtained 402 when adding 23 and 19.

A. Diagnostic assessment / निदानात्मक आकलन

B. Curriculum progression / पाठ्यचर्या प्रगति

C. Mathematical representation / गणितीय निरूपण

D. Learning outcome / अधिगम प्रतिफल

Correct answer / सही उत्तर: A. Diagnostic assessment / निदानात्मक आकलन

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

MCQ 467 • CORE PRACTICE · FORM 03

Which explanation best defines Diagnostic assessment / निदानात्मक आकलन?

A. Investigating particular errors or gaps in mathematical understanding.

B. An observable statement of expected mathematical learning.

C. Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

D. Examining learner mistakes to infer their underlying reasoning.

Correct answer / सही उत्तर: A. Investigating particular errors or gaps in mathematical understanding.

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

MCQ 468 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Diagnostic assessment / निदानात्मक आकलन?

A. Children represent a sharing situation using division.

B. A pupil explains why 49 plus 21 is close to 70 before calculating.

C. A teacher asks how a child obtained 402 when adding 23 and 19.

D. Children tally classmates' favourite fruits and compare frequencies.

Correct answer / सही उत्तर: C. A teacher asks how a child obtained 402 when adding 23 and 19.

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

MCQ 469 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Investigating particular errors or gaps in mathematical understanding. (2) Finding a reasonable approximate quantity or result.

A. Estimation / अनुमान | Diagnostic assessment / निदानात्मक आकलन

B. Mathematical argument / गणितीय तर्क प्रस्तुति | Estimation / अनुमान

C. Diagnostic assessment / निदानात्मक आकलन | Abstraction / अमूर्तीकरण

D. Diagnostic assessment / निदानात्मक आकलन | Estimation / अनुमान

Correct answer / सही उत्तर: D. Diagnostic assessment / निदानात्मक आकलन | Estimation / अनुमान

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19. Estimation / अनुमान: Finding a reasonable approximate quantity or result. Application: A child estimates the number of pencils in a jar before counting.

MCQ 470 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A teacher asks how a child obtained 402 when adding 23 and 19. (2) A child immediately identifies three dots on a card.

A. Mathematics textbook / गणित पाठ्यपुस्तक | Subitizing / त्वरित संख्या पहचान

B. Diagnostic assessment / निदानात्मक आकलन | Spatial thinking / स्थानिक चिंतन

C. Diagnostic assessment / निदानात्मक आकलन | Subitizing / त्वरित संख्या पहचान

D. Subitizing / त्वरित संख्या पहचान | Diagnostic assessment / निदानात्मक आकलन

Correct answer / सही उत्तर: C. Diagnostic assessment / निदानात्मक आकलन | Subitizing / त्वरित संख्या पहचान

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19. Subitizing / त्वरित संख्या पहचान: Recognising a small quantity without counting each item individually. Application: A child immediately identifies three dots on a card.

GyanTech Guru Ji

MCQ 471 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Diagnostic assessment / निदानात्मक आकलन and Mathematical discussion / गणितीय चर्चा.

A. Organising mathematical ideas in a coherent developmental sequence. | Sharing, comparing and justifying ways of solving a problem.

B. Investigating particular errors or gaps in mathematical understanding. | Sharing, comparing and justifying ways of solving a problem.

C. Sharing, comparing and justifying ways of solving a problem. | Investigating particular errors or gaps in mathematical understanding.

D. Investigating particular errors or gaps in mathematical understanding. | Forming a tentative generalisation from observed cases.

Correct answer / सही उत्तर: B. Investigating particular errors or gaps in mathematical understanding. | Sharing, comparing and justifying ways of solving a problem.

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19. Mathematical discussion / गणितीय चर्चा: Sharing, comparing and justifying ways of solving a problem. Application: Pairs compare two methods for adding 37 and 28.

MCQ 472 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Diagnostic assessment / निदानात्मक आकलन and Unit planning / इकाई योजना.

A. A teacher asks how a child obtained 402 when adding 23 and 19. | A child explains why two differently arranged shapes have equal area.

B. A child counts each object once in a stable order. | A teacher plans several connected lessons on measurement.

C. A teacher plans several connected lessons on measurement. | A teacher asks how a child obtained 402 when adding 23 and 19.

D. A teacher asks how a child obtained 402 when adding 23 and 19. | A teacher plans several connected lessons on measurement.

Correct answer / सही उत्तर: D. A teacher asks how a child obtained 402 when adding 23 and 19. | A teacher plans several connected lessons on measurement.

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19. Unit planning / इकाई योजना: Sequencing related lessons to develop mathematical goals over time. Application: A teacher plans several connected lessons on measurement.

MCQ 473 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Diagnostic assessment / निदानात्मक आकलन / Mental mathematics / मानसिक गणना)

A. Mathematical discussion / गणितीय चर्चा → Creating meaningful mathematical questions from a situation.

B. Diagnostic assessment / निदानात्मक आकलन → Investigating particular errors or gaps in mathematical understanding.

C. Diagnostic assessment / निदानात्मक आकलन → Using flexible number relationships without written standard algorithms.

D. Mental mathematics / मानसिक गणना → Sharing, comparing and justifying ways of solving a problem.

Correct answer / सही उत्तर: B. Diagnostic assessment / निदानात्मक आकलन → Investigating particular errors or gaps in mathematical understanding.

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

MCQ 474 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Diagnostic assessment / निदानात्मक आकलन / Task sequencing / कार्य क्रम)

A. Diagnostic assessment / निदानात्मक आकलन → A teacher asks how a child obtained 402 when adding 23 and 19.

B. Non-standard measurement / अमानक मापन → A child estimates the number of pencils in a jar before counting.

C. Task sequencing / कार्य क्रम → Children measure a desk using equal paper strips.

D. Diagnostic assessment / निदानात्मक आकलन → A lesson moves from equal groups to drawings and multiplication notation.

Correct answer / सही उत्तर: A. Diagnostic assessment / निदानात्मक आकलन → A teacher asks how a child obtained 402 when adding 23 and 19.

Explanation / व्याख्या

Diagnostic assessment / निदानात्मक आकलन: Investigating particular errors or gaps in mathematical understanding. Application: A teacher asks how a child obtained 402 when adding 23 and 19.

MCQ 475 • CORE PRACTICE · FORM 01

Identify the concept described: A task requiring demonstration of mathematical knowledge in action.

A. Mathematical discussion / गणितीय चर्चा

B. Inductive reasoning / आगमनात्मक तर्क

C. Local resources / स्थानीय संसाधन

D. Performance task / प्रदर्शन कार्य

Correct answer / सही उत्तर: D. Performance task / प्रदर्शन कार्य

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 476 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Pupils measure and compare real classroom objects.

A. Mathematical discussion / गणितीय चर्चा

B. Performance task / प्रदर्शन कार्य

C. Cardinality / गणन संख्या बोध

D. Multiple strategies / अनेक रणनीतियाँ

Correct answer / सही उत्तर: B. Performance task / प्रदर्शन कार्य

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 477 • CORE PRACTICE · FORM 03

Which explanation best defines Performance task / प्रदर्शन कार्य?

A. An observable statement of expected mathematical learning.

B. Expressing ideas through objects, pictures, symbols or language.

C. Showing mathematical relationships with actual objects.

D. A task requiring demonstration of mathematical knowledge in action.

Correct answer / सही उत्तर: D. A task requiring demonstration of mathematical knowledge in action.

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 478 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Performance task / प्रदर्शन कार्य?

A. Pupils measure and compare real classroom objects.

B. Children represent a sharing situation using division.

C. Children tally classmates' favourite fruits and compare frequencies.

D. After counting five shells, a child answers how many without counting again.

Correct answer / सही उत्तर: A. Pupils measure and compare real classroom objects.

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 479 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) A task requiring demonstration of mathematical knowledge in action. (2) Using precise terms and symbols to communicate mathematical meaning.

A. Performance task / प्रदर्शन कार्य | Mental mathematics / मानसिक गणना

B. Mathematical language / गणितीय भाषा | Performance task / प्रदर्शन कार्य

C. Performance task / प्रदर्शन कार्य | Mathematical language / गणितीय भाषा

D. Mathematics laboratory / गणित प्रयोगशाला | Mathematical language / गणितीय भाषा

Correct answer / सही उत्तर: C. Performance task / प्रदर्शन कार्य | Mathematical language / गणितीय भाषा

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects. Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

GyanTech Guru Ji

MCQ 480 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Pupils measure and compare real classroom objects. (2) Children arrange sticks from shortest to longest.

A. Performance task / प्रदर्शन कार्य | Abstraction / अमूर्तीकरण

B. Performance task / प्रदर्शन कार्य | Seriation / क्रमबद्धता

C. Mathematics textbook / गणित पाठ्यपुस्तक | Seriation / क्रमबद्धता

D. Seriation / क्रमबद्धता | Performance task / प्रदर्शन कार्य

Correct answer / सही उत्तर: B. Performance task / प्रदर्शन कार्य | Seriation / क्रमबद्धता

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects. Seriation / क्रमबद्धता: Arranging items in order by a measurable property. Application: Children arrange sticks from shortest to longest.

GyanTech Guru Ji

MCQ 481 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Performance task / प्रदर्शन कार्य and Task sequencing / कार्य क्रम.

A. A task requiring demonstration of mathematical knowledge in action. | Arranging mathematical tasks from accessible experiences toward greater complexity.

B. Creating meaningful mathematical questions from a situation. | Arranging mathematical tasks from accessible experiences toward greater complexity.

C. A task requiring demonstration of mathematical knowledge in action. | Arranging items in order by a measurable property.

D. Arranging mathematical tasks from accessible experiences toward greater complexity. | A task requiring demonstration of mathematical knowledge in action.

Correct answer / सही उत्तर: A. A task requiring demonstration of mathematical knowledge in action. | Arranging mathematical tasks from accessible experiences toward greater complexity.

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects. Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 482 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Performance task / प्रदर्शन कार्य and Number line / संख्या रेखा.

A. After counting five shells, a child answers how many without counting again. | A child shows 8 minus 3 by moving left three steps.

B. Pupils measure and compare real classroom objects. | A child shows 8 minus 3 by moving left three steps.

C. A child shows 8 minus 3 by moving left three steps. | Pupils measure and compare real classroom objects.

D. Pupils measure and compare real classroom objects. | A child gives one pencil to each pupil to check if there are enough.

Correct answer / सही उत्तर: B. Pupils measure and compare real classroom objects. | A child shows 8 minus 3 by moving left three steps.

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects. Number line / संख्या रेखा: A linear representation of ordered numerical positions. Application: A child shows 8 minus 3 by moving left three steps.

MCQ 483 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Performance task / प्रदर्शन कार्य / Geometric reasoning / ज्यामितीय तर्क)

A. Performance task / प्रदर्शन कार्य → A task requiring demonstration of mathematical knowledge in action.

B. Performance task / प्रदर्शन कार्य → Identifying and explaining spatial properties and relationships.

C. Error analysis / त्रुटि विश्लेषण → Materials available in the community used for mathematical exploration.

D. Geometric reasoning / ज्यामितीय तर्क→ Examining learner mistakes to infer their underlying reasoning.

Correct answer / सही उत्तर: A. Performance task / प्रदर्शन कार्य → A task requiring demonstration of mathematical knowledge in action.

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 484 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Performance task / प्रदर्शन कार्य / Subitizing / त्वरित संख्या पहचान)

A. Performance task / प्रदर्शन कार्य → A child immediately identifies three dots on a card.

B. Performance task / प्रदर्शन कार्य → Pupils measure and compare real classroom objects.

C. Pictorial representation / चित्रात्मक निरूपण → A pupil can compare two lengths using the same unit.

D. Subitizing / त्वरित संख्या पहचान → A pupil draws groups of circles to represent multiplication.

Correct answer / सही उत्तर: B. Performance task / प्रदर्शन कार्य → Pupils measure and compare real classroom objects.

Explanation / व्याख्या

Performance task / प्रदर्शन कार्य: A task requiring demonstration of mathematical knowledge in action. Application: Pupils measure and compare real classroom objects.

MCQ 485 • CORE PRACTICE · FORM 01

Identify the concept described: Criteria describing quality of mathematical reasoning and representation.

A. Mathematical rubric / गणितीय मानदंड तालिका

B. Place value / स्थानीय मान

C. Deductive reasoning / निगमनात्मक तर्क

D. Pictorial representation / चित्रात्मक निरूपण

Correct answer / सही उत्तर: A. Mathematical rubric / गणितीय मानदंड तालिका

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

MCQ 486 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? A teacher assesses explanation, strategy and accuracy separately.

A. Data handling / आँकड़ा प्रबंधन

B. Error analysis / त्रुटि विश्लेषण

C. Mathematical language / गणितीय भाषा

D. Mathematical rubric / गणितीय मानदंड तालिका

Correct answer / सही उत्तर: D. Mathematical rubric / गणितीय मानदंड तालिका

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

MCQ 487 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematical rubric / गणितीय मानदंड तालिका?

A. Arranging mathematical tasks from accessible experiences toward greater complexity.

B. Showing mathematical relationships with drawings or diagrams.

C. Allowing different valid methods for solving a problem.

D. Criteria describing quality of mathematical reasoning and representation.

Correct answer / सही उत्तर: D. Criteria describing quality of mathematical reasoning and representation.

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

MCQ 488 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematical rubric / गणितीय मानदंड तालिका?

A. A child estimates the number of pencils in a jar before counting.

B. Counting and grouping experiences precede formal multiplication notation.

C. A teacher assesses explanation, strategy and accuracy separately.

D. A child immediately identifies three dots on a card.

Correct answer / सही उत्तर: C. A teacher assesses explanation, strategy and accuracy separately.

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

GyanTech Guru Ji

MCQ 489 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Criteria describing quality of mathematical reasoning and representation. (2) Materials available in the community used for mathematical exploration.

A. Cardinality / गणन संख्या बोध | Local resources / स्थानीय संसाधन

B. Mathematical rubric / गणितीय मानदंड तालिका | Deductive reasoning / निगमनात्मक तर्क

C. Local resources / स्थानीय संसाधन | Mathematical rubric / गणितीय मानदंड तालिका

D. Mathematical rubric / गणितीय मानदंड तालिका | Local resources / स्थानीय संसाधन

Correct answer / सही उत्तर: D. Mathematical rubric / गणितीय मानदंड तालिका | Local resources / स्थानीय संसाधन

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately. Local resources / स्थानीय संसाधन: Materials available in the community used for mathematical exploration. Application: Children use market price labels for a money comparison task.

MCQ 490 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) A teacher assesses explanation, strategy and accuracy separately. (2) A lesson moves from equal groups to drawings and multiplication notation.

A. Task sequencing / कार्य क्रम | Mathematical rubric / गणितीय मानदंड तालिका

B. Mathematical rubric / गणितीय मानदंड तालिका | Non-standard measurement / अमानक मापन

C. Mathematical rubric / गणितीय मानदंड तालिका | Task sequencing / कार्य क्रम

D. Manipulatives / मूर्त शिक्षण सामग्री | Task sequencing / कार्य क्रम

Correct answer / सही उत्तर: C. Mathematical rubric / गणितीय मानदंड तालिका | Task sequencing / कार्य क्रम

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately. Task sequencing / कार्य क्रम: Arranging mathematical tasks from accessible experiences toward greater complexity. Application: A lesson moves from equal groups to drawings and multiplication notation.

MCQ 491 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematical rubric / गणितीय मानदंड तालिका and Curriculum progression / पाठ्यचर्या प्रगति.

A. Organising mathematical ideas in a coherent developmental sequence. | Criteria describing quality of mathematical reasoning and representation.

B. Criteria describing quality of mathematical reasoning and representation. | A linear representation of ordered numerical positions.

C. Creating meaningful mathematical questions from a situation. | Organising mathematical ideas in a coherent developmental sequence.

D. Criteria describing quality of mathematical reasoning and representation. | Organising mathematical ideas in a coherent developmental sequence.

Correct answer / सही उत्तर: D. Criteria describing quality of mathematical reasoning and representation. | Organising mathematical ideas in a coherent developmental sequence.

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately. Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 492 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematical rubric / गणितीय मानदंड तालिका and Geometric reasoning / ज्यामितीय तर्क

A. Children tally classmates' favourite fruits and compare frequencies. | Pupils sort quadrilaterals according to their sides and angles.

B. A teacher assesses explanation, strategy and accuracy separately. | A child immediately identifies three dots on a card.

C. Pupils sort quadrilaterals according to their sides and angles. | A teacher assesses explanation, strategy and accuracy separately.

D. A teacher assesses explanation, strategy and accuracy separately. | Pupils sort quadrilaterals according to their sides and angles.

Correct answer / सही उत्तर: D. A teacher assesses explanation, strategy and accuracy separately. | Pupils sort quadrilaterals according to their sides and angles.

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately. Geometric reasoning / ज्यामितीय तर्क Identifying and explaining spatial properties and relationships. Application: Pupils sort quadrilaterals according to their sides and angles.

MCQ 493 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematical rubric / गणितीय मानदंड तालिका / Number line / संख्या रेखा)

A. Mathematical pattern / गणितीय पैटर्न → Allowing different valid methods for solving a problem.

B. Mathematical rubric / गणितीय मानदंड तालिका → A linear representation of ordered numerical positions.

C. Mathematical rubric / गणितीय मानदंड तालिका → Criteria describing quality of mathematical reasoning and representation.

D. Number line / संख्या रेखा → A regularity described by a relationship or rule.

Correct answer / सही उत्तर: C. Mathematical rubric / गणितीय मानदंड तालिका → Criteria describing quality of mathematical reasoning and representation.

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

MCQ 494 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematical rubric / गणितीय मानदंड तालिका / Mathematical representation / गणितीय निरूपण)

A. Mathematical rubric / गणितीय मानदंड तालिका → A teacher assesses explanation, strategy and accuracy separately.

B. Mathematical rubric / गणितीय मानदंड तालिका → A pupil draws equal groups to explain a multiplication expression.

C. Curriculum progression / पाठ्यचर्या प्रगति → A child shows 8 minus 3 by moving left three steps.

D. Mathematical representation / गणितीय निरूपण → Counting and grouping experiences precede formal multiplication notation.

Correct answer / सही उत्तर: A. Mathematical rubric / गणितीय मानदंड तालिका → A teacher assesses explanation, strategy and accuracy separately.

Explanation / व्याख्या

Mathematical rubric / गणितीय मानदंड तालिका: Criteria describing quality of mathematical reasoning and representation. Application: A teacher assesses explanation, strategy and accuracy separately.

Short-answer revision

Recall the idea before reading the model answer.

REVISION 07.01

Explain Formative assessment / निर्माणात्मक आकलन and give one classroom example.

Model answer: Using ongoing evidence to guide further mathematics learning. A teacher changes grouping after observing pupils' fraction strategies.

REVISION 07.02

Explain Summative assessment / संकलनात्मक आकलन and give one classroom example.

Model answer: Evaluating mathematics achievement after an instructional period. A final unit task checks understanding of measurement concepts.

REVISION 07.03

Explain Qualitative feedback / गुणात्मक प्रतिक्रिया and give one classroom example.

Model answer: Descriptive information about strengths and next steps in learning. The teacher explains how to improve the alignment of tens and ones.

REVISION 07.04

Explain Open-ended task / मुक्त उत्तर कार्य and give one classroom example.

Model answer: A task allowing multiple valid solutions or approaches. Children find different pairs of whole numbers whose sum is ten.

GyanTech Guru Ji

REVISION 07.05

Explain Diagnostic assessment / निदानात्मक आकलन and give one classroom example.

Model answer: Investigating particular errors or gaps in mathematical understanding. A teacher asks how a child obtained 402 when adding 23 and 19.

REVISION 07.06

Explain Performance task / प्रदर्शन कार्य and give one classroom example.

Model answer: A task requiring demonstration of mathematical knowledge in action. Pupils measure and compare real classroom objects.

REVISION 07.07

Explain Mathematical rubric / गणितीय मानदंड तालिका and give one classroom example.

Model answer: Criteria describing quality of mathematical reasoning and representation. A teacher assesses explanation, strategy and accuracy separately.

GyanTech Guru Ji

CHAPTER 08 • 22 MCQs • 2 REVISION PROMPTS

Curriculum

Important topics, examples, new classroom scenarios and core practice

Important topics & revision notes

Curriculum progression / पाठ्यचर्या प्रगति

Organising mathematical ideas in a coherent developmental sequence.

Classroom example: Counting and grouping experiences precede formal multiplication notation.

Mathematical problem solving / गणितीय समस्या समाधान

Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

Classroom example: Pupils plan how to distribute materials fairly and explain the solution.

New classroom-based questions

Apply concepts to realistic teaching decisions.

MCQ 495 • NEW CLASSROOM APPLICATION

Which progression supports learning about area?

A. Avoid measuring real surfaces

B. Memorise formulas before any meaning

C. Cover surfaces with equal units, compare counts, then introduce formulas

D. Start with calculus

Correct answer / सही उत्तर: C. Cover surfaces with equal units, compare counts, then introduce formulas

Explanation / व्याख्या

Concrete measurement precedes formal generalisation.

MCQ 496 • NEW CLASSROOM APPLICATION

Which activity links mathematics to citizenship and daily decisions?

A. Avoid discussion of practical decisions
B. Compare prices and quantities when planning a class event budget
C. Memorise unrelated symbols only
D. Copy a decorative chart

Correct answer / सही उत्तर: B. Compare prices and quantities when planning a class event budget

Explanation / व्याख्या

Authentic contexts develop mathematical literacy and informed choices.

Core question bank

Ten related practice formats; core concepts recur for revision.

MCQ 497 • CORE PRACTICE · FORM 01

Identify the concept described: Organising mathematical ideas in a coherent developmental sequence.

A. Learning outcome / अधिगम प्रतिफल
B. Spatial thinking / स्थानिक चिंतन
C. Multiple strategies / अनेक रणनीतियाँ
D. Curriculum progression / पाठ्यचर्या प्रगति

Correct answer / सही उत्तर: D. Curriculum progression / पाठ्यचर्या प्रगति

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

GyanTech Guru Ji

MCQ 498 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Counting and grouping experiences precede formal multiplication notation.

A. Number sense / संख्या बोध

B. Geometric reasoning / ज्यामितीय तर्क

C. Spatial thinking / स्थानिक चिंतन

D. Curriculum progression / पाठ्यचर्या प्रगति

Correct answer / सही उत्तर: D. Curriculum progression / पाठ्यचर्या प्रगति

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 499 • CORE PRACTICE · FORM 03

Which explanation best defines Curriculum progression / पाठ्यचर्या प्रगति?

A. A task allowing multiple valid solutions or approaches.

B. Organising mathematical ideas in a coherent developmental sequence.

C. Collecting, organising and interpreting information.

D. Sequencing related lessons to develop mathematical goals over time.

Correct answer / सही उत्तर: B. Organising mathematical ideas in a coherent developmental sequence.

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 500 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Curriculum progression / पाठ्यचर्या प्रगति?

A. Counting and grouping experiences precede formal multiplication notation.

B. Children extend a repeating red-blue-blue sequence.

C. Pupils measure and compare real classroom objects.

D. A pupil draws groups of circles to represent multiplication.

Correct answer / सही उत्तर: A. Counting and grouping experiences precede formal multiplication notation.

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

GyanTech Guru Ji

MCQ 501 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Organising mathematical ideas in a coherent developmental sequence. (2) Applying mathematical understanding and processes in meaningful situations.

A. Curriculum progression / पाठ्यचर्या प्रगति | Mathematical competency / गणितीय दक्षता

B. Mathematical competency / गणितीय दक्षता | Curriculum progression / पाठ्यचर्या प्रगति

C. Subitizing / त्वरित संख्या पहचान | Mathematical competency / गणितीय दक्षता

D. Curriculum progression / पाठ्यचर्या प्रगति | Cardinality / गणन संख्या बोध

Correct answer / सही उत्तर: A. Curriculum progression / पाठ्यचर्या प्रगति | Mathematical competency / गणितीय दक्षता

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation. Mathematical competency / गणितीय दक्षता: Applying mathematical understanding and processes in meaningful situations. Application: A learner chooses an appropriate unit to measure a desk.

MCQ 502 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Counting and grouping experiences precede formal multiplication notation. (2) Pupils notice that adding two even numbers gives even results and test more cases.

A. Curriculum progression / पाठ्यचर्या प्रगति | One-to-one correspondence / एक-एक संगति

B. Seriation / क्रमबद्धता | Inductive reasoning / आगमनात्मक तर्क

C. Inductive reasoning / आगमनात्मक तर्क| Curriculum progression / पाठ्यचर्या प्रगति

D. Curriculum progression / पाठ्यचर्या प्रगति | Inductive reasoning / आगमनात्मक तर्क

Correct answer / सही उत्तर: D. Curriculum progression / पाठ्यचर्या प्रगति | Inductive reasoning / आगमनात्मक तर्क

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation. Inductive reasoning / आगमनात्मक तर्क Forming a tentative generalisation from observed cases. Application: Pupils notice that adding two even numbers gives even results and test more cases.

MCQ 503 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Curriculum progression / पाठ्यचर्या प्रगति and Mathematization / गणितीकरण.

A. Applying mathematical understanding and processes in meaningful situations. | Expressing or analysing real situations using mathematical ideas.

B. Organising mathematical ideas in a coherent developmental sequence. | Sharing, comparing and justifying ways of solving a problem.

C. Expressing or analysing real situations using mathematical ideas. | Organising mathematical ideas in a coherent developmental sequence.

D. Organising mathematical ideas in a coherent developmental sequence. | Expressing or analysing real situations using mathematical ideas.

Correct answer / सही उत्तर: D. Organising mathematical ideas in a coherent developmental sequence. | Expressing or analysing real situations using mathematical ideas.

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation. Mathematization / गणितीकरण: Expressing or analysing real situations using mathematical ideas. Application: Children represent a sharing situation using division.

MCQ 504 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Curriculum progression / पाठ्यचर्या प्रगति and Place-value blocks / स्थानीय मान ब्लॉक.

A. Counting and grouping experiences precede formal multiplication notation. | A pupil exchanges ten unit cubes for a ten rod.

B. Counting and grouping experiences precede formal multiplication notation. | A teacher plans several connected lessons on measurement.

C. A pupil uses counters to demonstrate addition. | A pupil exchanges ten unit cubes for a ten rod.

D. A pupil exchanges ten unit cubes for a ten rod. | Counting and grouping experiences precede formal multiplication notation.

Correct answer / सही उत्तर: A. Counting and grouping experiences precede formal multiplication notation. | A pupil exchanges ten unit cubes for a ten rod.

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation. Place-value blocks / स्थानीय मान ब्लॉक: Materials representing units, tens and other base-ten groupings. Application: A pupil exchanges ten unit cubes for a ten rod.

MCQ 505 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Curriculum progression / पाठ्यचर्या प्रगति / Geometric reasoning / ज्यामितीय तर्क)

A. Geometric reasoning / ज्यामितीय तर्क→ Arranging items in order by a measurable property.

B. Seriation / क्रमबद्धता → Recognising a small quantity without counting each item individually.

C. Curriculum progression / पाठ्यचर्या प्रगति → Identifying and explaining spatial properties and relationships.

D. Curriculum progression / पाठ्यचर्या प्रगति → Organising mathematical ideas in a coherent developmental sequence.

Correct answer / सही उत्तर: D. Curriculum progression / पाठ्यचर्या प्रगति → Organising mathematical ideas in a coherent developmental sequence.

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 506 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Curriculum progression / पाठ्यचर्या प्रगति / Concrete representation / मूर्त निरूपण)

A. Formative assessment / निर्माणात्मक आकलन → Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

B. Curriculum progression / पाठ्यचर्या प्रगति → A pupil uses counters to demonstrate addition.

C. Concrete representation / मूर्त निरूपण → A teacher changes grouping after observing pupils' fraction strategies.

D. Curriculum progression / पाठ्यचर्या प्रगति → Counting and grouping experiences precede formal multiplication notation.

Correct answer / सही उत्तर: D. Curriculum progression / पाठ्यचर्या प्रगति → Counting and grouping experiences precede formal multiplication notation.

Explanation / व्याख्या

Curriculum progression / पाठ्यचर्या प्रगति: Organising mathematical ideas in a coherent developmental sequence. Application: Counting and grouping experiences precede formal multiplication notation.

MCQ 507 • CORE PRACTICE · FORM 01

Identify the concept described: Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

A. Mathematical problem solving / गणितीय समस्या समाधान

B. Number line / संख्या रेखा

C. Mathematization / गणितीकरण

D. Abstraction / अमूर्तीकरण

Correct answer / सही उत्तर: A. Mathematical problem solving / गणितीय समस्या समाधान

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution.

MCQ 508 • CORE PRACTICE · FORM 02

Which concept is best illustrated by this situation? Pupils plan how to distribute materials fairly and explain the solution.

A. Counting principle / गणना सिद्धांत

B. Mathematical problem solving / गणितीय समस्या समाधान

C. Pictograph / चित्रालेख

D. Mathematical language / गणितीय भाषा

Correct answer / सही उत्तर: B. Mathematical problem solving / गणितीय समस्या समाधान

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution.

MCQ 509 • CORE PRACTICE · FORM 03

Which explanation best defines Mathematical problem solving / गणितीय समस्या समाधान?

A. Descriptive information about strengths and next steps in learning.

B. Evaluating mathematics achievement after an instructional period.

C. Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

D. A linear representation of ordered numerical positions.

Correct answer / सही उत्तर: C. Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution.

MCQ 510 • CORE PRACTICE · FORM 04

Which classroom example best demonstrates Mathematical problem solving / गणितीय समस्या समाधान?

A. Pupils plan how to distribute materials fairly and explain the solution.

B. A pupil explains why 49 plus 21 is close to 70 before calculating.

C. A teacher adapts a book exercise into a hands-on activity.

D. A learner chooses an appropriate unit to measure a desk.

Correct answer / सही उत्तर: A. Pupils plan how to distribute materials fairly and explain the solution.

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution.

MCQ 511 • CORE PRACTICE · FORM 05

Identify the concepts in order. (1) Selecting and evaluating strategies to solve an unfamiliar mathematical situation. (2) Using precise terms and symbols to communicate mathematical meaning.

A. Mathematical language / गणितीय भाषा | Mathematical problem solving / गणितीय समस्या समाधान

B. Mathematical problem solving / गणितीय समस्या समाधान | Mathematical language / गणितीय भाषा

C. Pictorial representation / चित्रात्मक निरूपण | Mathematical language / गणितीय भाषा

D. Mathematical problem solving / गणितीय समस्या समाधान | Manipulatives / मूर्त शिक्षण सामग्री

Correct answer / सही उत्तर: B. Mathematical problem solving / गणितीय समस्या समाधान | Mathematical language / गणितीय भाषा

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution. Mathematical language / गणितीय भाषा: Using precise terms and symbols to communicate mathematical meaning. Application: A pupil writes 7 > 5 to express a comparison.

MCQ 512 • CORE PRACTICE · FORM 06

Match the situations to concepts, in order. (1) Pupils plan how to distribute materials fairly and explain the solution. (2) A child recognises that spreading five counters does not create more counters.

A. Mathematical problem solving / गणितीय समस्या समाधान | Qualitative feedback / गुणात्मक प्रतिक्रिया

B. Conservation of number / संख्या संरक्षण | Mathematical problem solving / गणितीय समस्या समाधान

C. Mathematical problem solving / गणितीय समस्या समाधान | Conservation of number / संख्या संरक्षण

D. Mathematics textbook / गणित पाठ्यपुस्तक | Conservation of number / संख्या संरक्षण

Correct answer / सही उत्तर: C. Mathematical problem solving / गणितीय समस्या समाधान | Conservation of number / संख्या संरक्षण

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution. Conservation of number / संख्या संरक्षण: Understanding that number remains unchanged when objects are rearranged without adding or removing any. Application: A child recognises that spreading five counters does not create more counters.

MCQ 513 • CORE PRACTICE · FORM 07

Select the correct meanings, in order, for Mathematical problem solving / गणितीय समस्या समाधान and Summative assessment / संकलनात्मक आकलन.

A. Selecting and evaluating strategies to solve an unfamiliar mathematical situation. | Examining learner mistakes to infer their underlying reasoning.

B. Evaluating mathematics achievement after an instructional period. | Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

C. Materials available in the community used for mathematical exploration. | Evaluating mathematics achievement after an instructional period.

D. Selecting and evaluating strategies to solve an unfamiliar mathematical situation. | Evaluating mathematics achievement after an instructional period.

Correct answer / सही उत्तर: D. Selecting and evaluating strategies to solve an unfamiliar mathematical situation. | Evaluating mathematics achievement after an instructional period.

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution. Summative assessment / संकलनात्मक आकलन: Evaluating mathematics achievement after an instructional period. Application: A final unit task checks understanding of measurement concepts.

MCQ 514 • CORE PRACTICE · FORM 08

Choose the examples, in order, for Mathematical problem solving / गणितीय समस्या समाधान and Multiple strategies / अनेक रणनीतियाँ.

A. Two pupils solve 18 + 7 by counting on and by making twenty. | Pupils plan how to distribute materials fairly and explain the solution.

B. A teacher asks how a child obtained 402 when adding 23 and 19. | Two pupils solve 18 + 7 by counting on and by making twenty.

C. Pupils plan how to distribute materials fairly and explain the solution. | Children use market price labels for a money comparison task.

D. Pupils plan how to distribute materials fairly and explain the solution. | Two pupils solve 18 + 7 by counting on and by making twenty.

Correct answer / सही उत्तर: D. Pupils plan how to distribute materials fairly and explain the solution. | Two pupils solve 18 + 7 by counting on and by making twenty.

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution. Multiple strategies / अनेक रणनीतियाँ: Allowing different valid methods for solving a problem. Application: Two pupils solve 18 + 7 by counting on and by making twenty.

MCQ 515 • CORE PRACTICE · FORM 09

Which concept–meaning pair is correctly matched? (Mathematical problem solving / गणितीय समस्या समाधान / Performance task / प्रदर्शन कार्य)

A. Mathematics textbook / गणित पाठ्यपुस्तक → Recognising a small quantity without counting each item individually.

B. Performance task / प्रदर्शन कार्य → A structured resource whose activities can support mathematical understanding.

C. Mathematical problem solving / गणितीय समस्या समाधान → Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

D. Mathematical problem solving / गणितीय समस्या समाधान → A task requiring demonstration of mathematical knowledge in action.

Correct answer / सही उत्तर: C. Mathematical problem solving / गणितीय समस्या समाधान → Selecting and evaluating strategies to solve an unfamiliar mathematical situation.

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution.

MCQ 516 • CORE PRACTICE · FORM 10

Which concept–classroom example pair is correctly matched? (Mathematical problem solving / गणितीय समस्या समाधान / Seriation / क्रमबद्धता)

A. Seriation / क्रमबद्धता → A pupil uses counters to demonstrate addition.

B. Concrete representation / मूर्त निरूपण → Using the fact that all squares have four sides, a pupil concludes a given square has four sides.

C. Mathematical problem solving / गणितीय समस्या समाधान → Children arrange sticks from shortest to longest.

D. Mathematical problem solving / गणितीय समस्या समाधान → Pupils plan how to distribute materials fairly and explain the solution.

Correct answer / सही उत्तर: D. Mathematical problem solving / गणितीय समस्या समाधान → Pupils plan how to distribute materials fairly and explain the solution.

Explanation / व्याख्या

Mathematical problem solving / गणितीय समस्या समाधान: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Application: Pupils plan how to distribute materials fairly and explain the solution.

Short-answer revision

Recall the idea before reading the model answer.

REVISION 08.01

Explain Curriculum progression / पाठ्यचर्या प्रगति and give one classroom example.

Model answer: Organising mathematical ideas in a coherent developmental sequence. Counting and grouping experiences precede formal multiplication notation.

REVISION 08.02

Explain Mathematical problem solving / गणितीय समस्या समाधान and give one classroom example.

Model answer: Selecting and evaluating strategies to solve an unfamiliar mathematical situation. Pupils plan how to distribute materials fairly and explain the solution.

GyanTech Guru Ji