Grade 06
Unit 05

Maths

Course Outline

Formative 2

- **Integers**
- **Understanding elementary shapes**
- **Practical geometry**

MAT

(Monthly Achievement Tests)

Short Code: 447307

Test ID: NMM06U050

SOUVENIR INFOTECH

Guide Lines

1.Each set consists of:

50|Warm-up/Foundation Questions

30|Regular Questions

20|Thinking Ability Questions

2. The time allocation and instructions regarding the questions are printed clearly in the beginning of each question types. The answers should be written or tick marked as per the instructions given. It is suggested to use pencil initially, so as to enable you to reuse the practice papers.

3. **According to the new pattern of CBSE these practice papers will be very useful especially for syllabus related Quiz, Debates, Visuals related checking and Orals etc.,**

4. After marking the answers, the scores of students can be checked and for marks obtained guidelines are given along with the question solving instructions. Follow those instructions and if, you are fully satisfied with your performance then check for your expected grades as per the CBSE guidelines as given on the back of each set.

5. Remember that this is only a guideline not the finally worked out result. You can further improve your performance by increase your practice.

6. For your convenience please follow following essential examiner's advices:

   a.Answer all the questions
   b.Read all the Options carefully
   c.Understand and use correct scientific language in your responses.

We from SOUVENIR INFOTECH **wish skillful learning for your bright future.**

Before going for the test, look at least :

1. First of all go through the syllabus of the test according to the **Course Outline** provided at the front page of each MAT.
2. After going through the syllabus once or twice or even more time as per your satisfaction, first of all do the Warm-up questions. If you score A+ grade in those 50 questions go to the next level otherwise go through the chapter again.
3. The box for **Specific Information** is very useful as it adds to your concept building. Try to fill specific information in the proper way so that you will get the maximum benefit of it.
4. **Let's Chat** portion will help you to prepare for oral assessment. Through this you can increase your capacity to interact on a particular topic related to your syllabus.
5. The **Extra Diet** portion is also there to enhance you knowledge through visulization of concept. This portion provides you added knowledge on various related concepts.
6. The information related to time factor is there to enhance your time management skills.
7. From the examiners point of view it is always advised to use Pencil for initial efforts. The use of pen is fruitful only when the final effort comes.

Examiner's Tips:

- Read the question carefully. Make sure you understand exactly what is required.
- If you find that you are unable to do a part of a question, do not give up. The next part may be easier and may provide a clue to what you might have done in the part you found difficult.
- Note the number of marks per question as guide to the depth of response needed.
- Underline or note the key words that tell you what is required.
- Underline or note data as you read the question.
- Structure your answer carefully.
- Show all steps in calculations. Include equations you use and show the substitution of data. remember to work according to units given.
- Make sure that your answers contain suitable significant figures (wherever necessary) and must include units in numericals.
- Draw diagrams and graphs carefully.
- Read data from graphs carefully; note scales and prefixes on axes.
- Keep your eye on the clock but don't panic.
- If you have time at the end, use it. Check that your descriptions and explanations make sense. Consider whether there is anything you could add to an explanation or description. Repeat calculations to ensure that you have not made a mistake.

50 Warm-up/Foundation Questions

Opening Window

To enlighten your fundamental/basic topic knowledge.

A+. If you score 45 or above marks, move to the next section confidently.

A. If you score between 40 and 45 marks, it is satisfactory. Bit more knowledge will bring excellent result.

B. If you score below 40, kindly go through the topic more seriously.

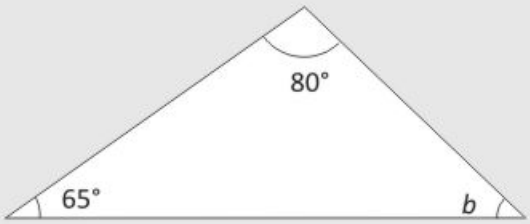
Section A (50 marks) **Time given – 50 minutes + 5 minutes for revision**

Questions 1 to 50 carry 1 mark each.

For each question four options are given. One of them is the correct answer. Make your choice and write its name (a, b, c or d) in the answer box provided.

1. In the triangle shown below, $\angle b$ = _____.

(a) 15° (b) 35° (c) 145° (d) 215

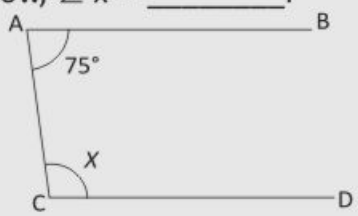


T – 1 min
S – Understanding elementary shapes

Ans.

2. In the figure below, $\angle x$ = _____.

(a) 15°
(b) 30°
(c) 75°
(d) 105°



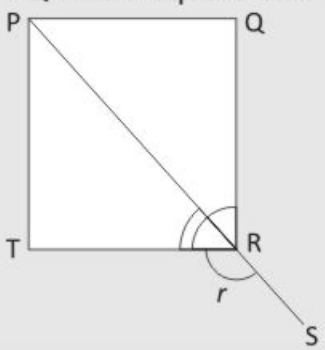
T – 1 min
S – Understanding elementary shapes

Ans.

3. In the diagram below, PQRT is a square and PRS is a straight line.

$\angle r$ = _____?

(a) 45°
(b) 90°
(c) 135°
(d) 180°



T – 1 min
S – Understanding elementary shapes

Ans.

4. In the diagram below, ABCD is a trapezium, CBE and ABF are straight lines.

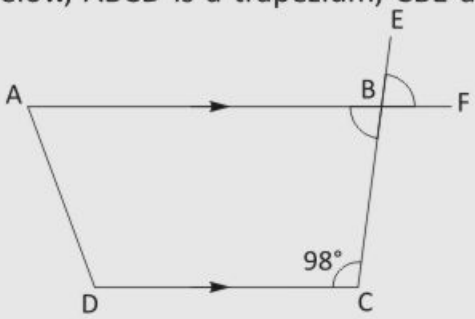
Find $\angle EBF$.

(a) 82°

(b) 92°

(c) 98°

(d) 100°

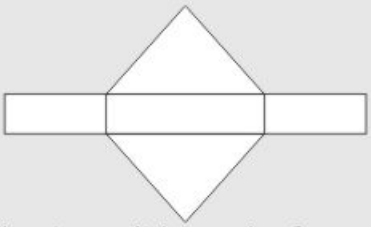


T – 1 min
S – Understanding elementary shapes

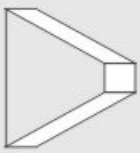
Ans.

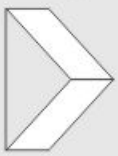
5. The diagram below shows a net of a solid.

T – 1 min
S – Understanding elementary shapes



Which one of the following solids can be formed by the net?

(a) 

(b) 

(c) 

(d) 

Ans.

6. _____ uses to draw line segment and to measure their lengths.

(a) Protractor (b) Divider

(c) Ruler (d) Compasses

T – 1 min
S – Practical geometry

Ans.

7. _____uses to draw and measure angle.

(a) Ruler (b) Compass

(c) Set square (d) Protractor

T – 1 min
S – Practical geometry

Ans.

8. _____ uses to draw perpendicular and parallel lines.

(a) Set square (b) Ruler

(c) Protractor (d) Compasses

T – 1 min
S – Practical geometry

Ans.

9. $+5-(-6)=$

(a) 21 (b) -21

(c) 11 (d) -11

T – 1 min
S – Integers

Ans.

10. $-4-(-8)=$

(a) 12 (b) -12

(c) 4 (d) -4

T – 1 min
S – Integers

Ans.

11. The measurement of a right angle is

(a) 180° (b) 90°

(c) 360° (d) 270°

T – 1 min
S – Practical geometry

Ans.

12. _____ angle is larger from a straight angle

(a) 90° (b) 100°

(c) reflex angle (d) none of these

T – 1 min
S – Practical geometry

Ans.

13. If a quadrilateral has two pairs of parallel sides is a

(a) Rhombus (b) Trapezium

(c) Parallelogram (d) none of these

T – 1 min
S – Practical geometry

Ans.

14. All the three sides are of unequal length are called

(a) Scalene triangle (b) Isosceles Triangle

(c) Equilateral Triangle (d) none of these

T – 1 min
S – Practical geometry

Ans.

15. $(+5)-(-6)$ is

(a) 1 (-1)

(c) 11 (d) -11

T – 1 min
S – Integers

Ans.

True or False

16. A pentagon has five sides.

T – 1 min
S – Understanding elementary shapes

Ans.

17. Equilateral triangle has equal sides.

T – 1 min
S – Understanding elementary shapes

Ans.

18. A rhombus with 4 right angles.

T – 1 min
S – Understanding elementary shapes

Ans.

19. Zero is larger than every naive integer.

T – 1 min
S – Understanding elementary shapes

Ans.

20. Farther a number from zero on the right.

T – 1 min
S – Understanding elementary shapes

Ans.

21. Chalk box is form of cuboids

T – 1 min
S – Understanding elementary shapes

Ans.

22. The number of lateral faces of cuboid is four.

T – 1 min
S – Understanding elementary shapes

Ans.

23. Every angle of an obtuse triangle is less than 90°.

T – 1 min
S – Practical geometry

Ans.

24. Two supplementary angles form a linear pair.

T – 1 min
S – Practical geometry

Ans.

25. A line has no end point.

T – 1 min
S – Practical geometry

Ans.

26. The length, breadth and height of a cuboid are called its three dimensions.

T – 1 min
S – Understanding elementary shapes

Ans.

27. A cuboid has 3 pair of opposite faces.

T – 1 min
S – Understanding elementary shapes

Ans.

28. Two adjacent faces of a cuboid meet in a line segment called its edges.

T – 1 min
S – Understanding elementary shapes

Ans.

29. All the faces of a cube are vertex.

T – 1 min
S – Understanding elementary shapes

Ans.

30. An octagon has six sides.

T – 1 min
S – Understanding elementary shapes

Ans.

Fill in the blanks

31. A rectangular prism has a _____ bar.

T – 1 min
S – Understanding elementary shapes

Ans.

32. We use a _____ to measure the size of an angle.

T – 1 min
S – Practical geometry

Ans.

33. An angle is _____ if its measures are smaller than that of a right angle.

T – 1 min
S – Practical geometry

Ans.

34. Two intersecting lines are _____ of the angle between them is 90°.

T – 1 min
S – Practical geometry

Ans.

35. Polygon has 6 sides called _____.

T – 1 min
S – Understanding elementary shapes

Ans.

36. $(+14)-(-16)=$

T – 1 min
S – Integers

Ans.

37. $(-16)-(-12)=$

T – 1 min
S – Integers

Ans.

38. The sum of the lengths of the sides of a triangle is called its _____.

T – 1 min
S – Practical geometry

Ans.

39. The sum of all angles at a point is _____.

T – 1 min
S – Practical geometry

Ans.

40. Sum of the angles forming a linear pair is _____.

T – 1 min
S – Practical geometry

Ans.

41. The number of edges of a cuboid is _____ .

T – 1 min
S – Practical geometry

Ans.

42. A cube has _____ diagonals.

T – 1 min
S – Understanding elementary shapes

Ans.

43. Tea box is a form of _____ .

T – 1 min
S – Understanding elementary shapes

Ans.

44. Right angle triangle has _____ angles.

T – 1 min
S – Practical geometry

Ans.

45. $(+45)-(-2)-4=$ _____.

T	– 1 min
S	– Integers

Ans.

Match the following columns:

T	– 5 min
S	– Practical geometry

Column A	***Column B***
46. Each angle is acute	(i) Right angled triangle
47. One angle is obtuse	(ii) Obtuse angled triangle
48. One angle is 90°	(iii) Acute angle triangle
49. All sides are equal length	(iv) Scalene triangle
50. All sides are of unequal length	(v) Equilateral triangle

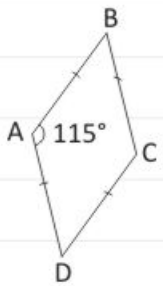
30 Regular Questions

Opening Window

To enlighten your regular knowledge of topic. If you score more than 55 marks here, you have achieved this level brilliantly. Move to the next level of test papers.

Section B (60 marks) **Time given – 45 minutes + 5 minutes for revision**
Questions 51 to 80 carry 2 marks each.

For Questions 51 to 53, refer to the diagram below.



51. What is the name of figure ABCD?

T – 1 min
S – Understanding elementary shapes

Ans.

52. ∠ABC = _____°

T – 1 min
S – Understanding elementary shapes

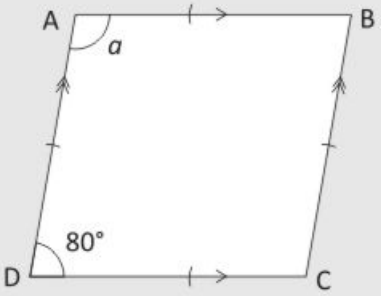
Ans.

53. ∠BCD = _____ °

T – 1 min
S – Understanding elementary shapes

Ans.

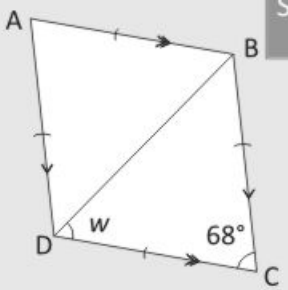
54. $\angle a =$ _____°



T – 1 min
S – Understanding elementary shapes

Ans.

55. $\angle w =$ _____°



T – 1 min
S – Understanding elementary shapes

Ans.

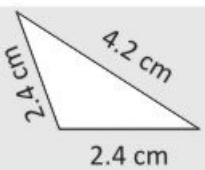
For question 56–58, some triangles have been given. State for each triangle, whether it is scalene, isosceles, or equilateral :

56.

T – 1 min
S – Understanding elementary shapes

Ans.

57.



T – 1 min
S – Understanding elementary shapes

Ans.

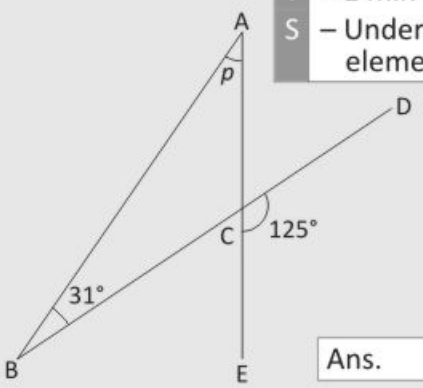
58.

T – 1 min
S – Understanding elementary shapes

Ans.

59. In the diagram below, ACE and BCD are straight lines. Find ∠ BAE.

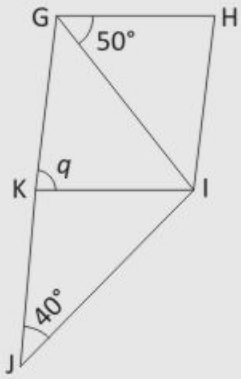
T – 1 min
S – Understanding elementary shapes



Ans.

60. In the diagram below, GHIK is a rhombus and GKJ is a straight line. Find ∠q.

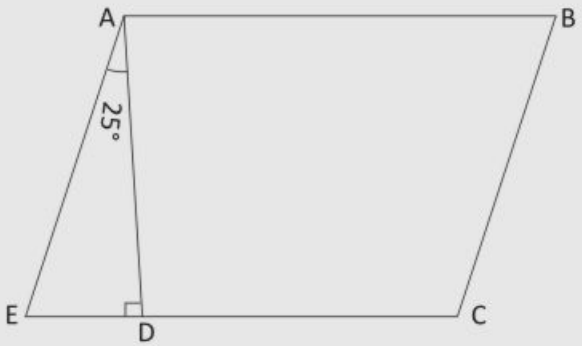
T – 1 min
S – Understanding elementary shapes



Ans.

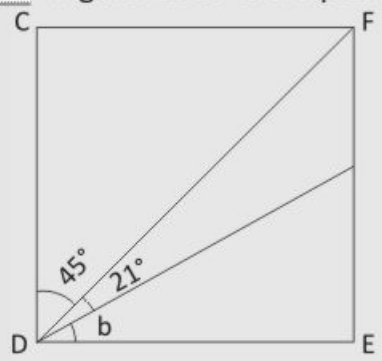
61. In the figure below, ABCE is a parallelogram. Find ∠ABC.

T – 2 min
S – Understanding elementary shapes



Ans.

62. Figure CDEF is a square. Find ∠b.

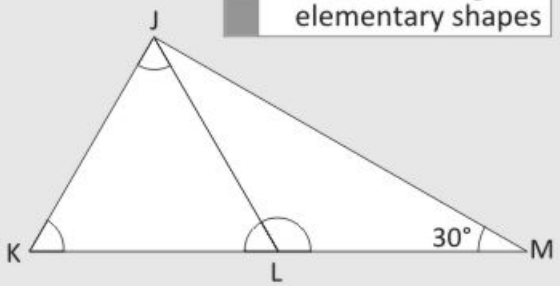


T – 2 min
S – Understanding elementary shapes

Ans.

63. In the figure below, KLM is a straight line. Find ∠LJM.

T – 2 min
S – Understanding elementary shapes



Ans.

Match the following columns:

T – 5 min
S – Understanding elementary shapes

	Column A		***Column B***
64.	Trapezium	(vi)	one pair of parallel sides
65.	Square	(vii)	two pairs of parallel sides
66.	Rectangle	(viii)	Parallelogram with 4 right angles
67.	Parallelogram	(ix)	A rhombus with 4 right angles
68.	Rhombus	(x)	Parallelogram with 4 sides of equal length

Question 69–73. Evaluate the following:

69. $+16 - 32 - (-32)$

T – 2 min
S – Integers

Ans.

70. $5+(-6)+(-4)-(-3)$

T – 2 min
S – Integers

Ans.

71. $18+4+(-4)-(-2)$

T – 2 min
S – Integers

Ans.

72. $-8+5-(-4)-(-8)$

T – 2 min
S – Integers

Ans.

73. $5+4-3+1+(-8)$

T – 2 min
S – Integers

Ans.

74. Add (+2) with (–3) on a number line.

T – 2 min
S – Integers

Ans.

75. Subtract (–2) from (–4) on a number line.

T – 2 min
S – Integers

Ans.

76. Draw a line of 4.2 cm.

T – 2 min
S – Integers

Ans.

77. Draw a line $\overline{AB}$ and a point P on it through P, draw a line segment $\overline{PQ}$ perpendicular to B.

T – 2 min
S – Practical geometry

Ans.

78. Draw an angle of 40°.

T – 2 min
S – Practical geometry

Ans.

79. Draw an angle of 25°.

T – 2 min
S – Practical geometry

Ans.

80. Draw an angle of 108°.

T	– 2 min
S	– Practical geometry

Ans.

20 Thinking Ability Questions

Opening Window

To enlighten your regular knowledge of topic. If you score more than 50 marks here, you have achieved this level brilliantly. Move to the next level of test papers.

Section C (60 marks) **Time given – 45 minutes + 5 minutes for revision**

81. Construct an angle of 120° with the help of compass and ruler.

T – 2 min
S – Practical geometry

Ans.

82. Construct an angle of 90° without using protractor.

T – 2 min
S – Practical geometry

Ans.

83. Construct an angle of 180° without using protractor.

T – 1 min
S – Practical geometry

Ans.

84. Draw an angle of 200° with the help of a protractor.

T – 2 min
S – Practical geometry

Ans.

85. With $\overline{AB}$ of length 4.2 cm as diameter draw a circle.

T – 2 min
S – Practical geometry

Ans.

86. Subtract (–3) from (–4) on number line.

T – 3 min
S – Practical geometry

Ans.

87. Find the value of (–5) – (–9) using number line.

T – 3 min
S – Practical geometry

Ans.

88. Subtract (–4) from (–7) on number line.

T – 3 min
S – Practical geometry

Ans.

89. Evaluate (–4) + (–6) + (–2) – (–5).

T – 3 min
S – Practical geometry

Ans.

90. Evaluate (–7) + (–3) – (–4) – (–2).

T – 3 min
S – Practical geometry

Ans.

91. Write any five three dimensional shapes.

T – 3 min
S – Understanding elementary shapes

Ans.

T – 10 min
S – Understanding elementary shapes

Complete the following:

A triangular prism looks like the shape of kaleidoscope. It has triangle as its base.

92. Faces _____

Ans.

93. Edges _____

Ans.

94. Corners _____

Ans.

95. Faces _____

Ans.

96. Edges _____

Ans.

97. Corners _____

Ans.

Question 98–100. Evaluate the following:

T – 9 min
S – Integers

98. $5+(-15)-(-16)-20$

Ans.

99. $-6+(-4)-(-21)-(-23)$

Ans.

100. $17+18+(-19)-(-35)$

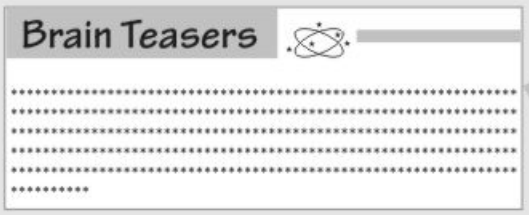
Ans.

Tools at a glance

Opening Window with instructions for your potential analysis and guideline to improve your performance.

Let's Chat, the feature with suggestive topics for discussion so as to improve your capacity to debate on various topics.

Box with time break-up of questions **(T)** and its concept (**S**, i.e., subject)



Brain Teasers i.e., Questions with difference to make the concepts of students crystal clear. These are the questions with higher difficulty levels to check the grip of the students over the concepts.

Extra Diet, the web link, the notation: www._____ to provide additional information regarding the concept for more clarity of thoughts.

CBSE GRADING PATTERN

As the new pattern includes **CCE** (Continuous and Comprehensive Evaluation) which will be run in two terms i.e., from April to September and October to March. Thus the school will conduct four **Formative** and two **Summative** Assessments.

However, the most generalised version of grades is given below:

MARKS PERCENTAGE	GRADE	GRADE POINT	CATEGORY
91 to 100	A1	10	Exceptional
81 to 90	A2	9	Excellent
71 to 80	B1	8	Very Good
61 to 70	B2	7	Good
51 to 60	C1	6	Ordinary
41 to 50	C2	5	Average
33 to 40	D	4	Below Average
21 to 32	E1	3	Improvement Needed
Below 20	E2	Below 2	Unsatisfactory