



GRADE 7

MATHEMATICS

School Level Examination (SLE) 2025

SUBJECT CODE

2

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1

Total Questions: 40

Total Marks: 40

Time: 1 Hour

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED TO DO SO

- Carefully fill in your **Name, Class, Roll Number**, and other required details on the **OMR Answer Sheet**.
- Use **only an HB pencil** to fill the OMR Answer Sheet.
- All questions are **compulsory** and carry **one mark** each.
- Only **OMR Answer Sheets** will be evaluated.
- There is **no negative marking** for incorrect answers.
- You may use the **last page** of the question paper for **rough work**.
- **Digital devices** like calculators, smart watches, or mobile phones are **not allowed**.
- After the exam, **submit** both the **OMR Answer Sheet** and the **Question Paper** to the invigilator.

This question paper contains a total of 40 questions, divided into three sections: A, B, and C.

Section A (Logical Reasoning)

1. In a certain code language 'MATHS IS LOGIC' is written as: 153221021 1121 14179115. In the same language, 'I LOVE MATHS' can be written as:

(A) 11 1417246 153221021 (B) 11 1417247 153221021
 (C) 9 1215225 153221021 (D) 11 1417247 153211021

2. Find the missing number.

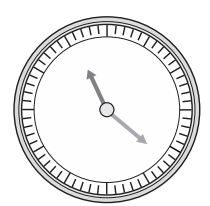
3, 11, 38, 102, _____, 443
 (A) 129 (B) 229 (C) 227 (D) 332

3. During a mass PT period, students are made to stand in such a way that the number of lines and the number of students in a line are the same. If Raghav's position in his line is 12th from right and 9th from left. How many students are there for the mass PT period?

(A) 441 (B) 961 (C) 484 (D) 400

4. If a clock shows 11:21, what will be the time on the mirror image of the clock?

(A) 12:39 (B) 1:39
 (C) 12:21 (D) 12:11



5. Find the missing number.

(A) 118 (B) 59
 (C) 76 (D) 67

23	63	34
31	?	28
21	63	42

6. Find the value of $A + B + C$

Note: Each alphabet represents a distinct digit, and the leftmost digit in each number cannot be zero.

(A) 15 (B) 19
 (C) 17 (D) 25

	A	A
X	B	A
C	A	B

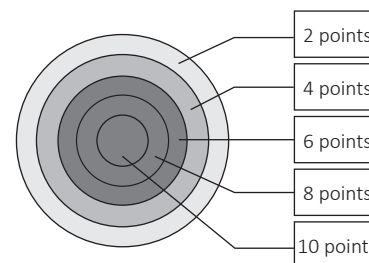
7. In a row having children facing towards South, A is fifteenth from the right end and B is third to the right of A, C who is fifth from the left end of the row is seventh to the left of B. What is position of A from the left end of the row?

(A) 12th (B) 11th (C) 10th (D) 9th

8. In an archery competition, an archer shoots the target in different regions. The score of each is shown in the figure.

If he shoots in any two region for maximum two times, then in how many minimum times will he have to shoot to get 40 points ?

(A) 4 (B) 3
 (C) 5 (D) 6



Section B (Subject Specific)

9. Gopi constructed a right-angled $\triangle ABC$ in which $AB = 5$ cm and hypotenuse $AC = 6$ cm, using the given steps. Arrange the steps in the correct order.

P – With A as centre and radius 6 cm, draw an arc intersecting BX at point C.

Q – At B, construct $\angle ABX = 90^\circ$.

R – Join AC

S – Draw a line segment $AB = 5$ cm.

(A) SQRP

(B) SRQP

(C) SPQR

(D) SQPR

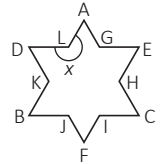
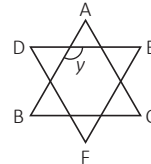
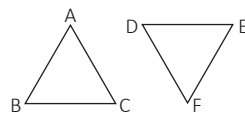
10. A six pointed star is made up of two equilateral triangles placed on the top of each other. It can also be viewed as a concave polygon of 12 sides. In the following figure AECFBD is one such six pointed star which is a 12 sided polygon. Here triangle DEF overlaps ABC. Find the value of x and y .

(A) $60^\circ, 120^\circ$

(B) $120^\circ, 160^\circ$

(C) $240^\circ, 120^\circ$

(D) $120^\circ, 240^\circ$



11. A student compared $-\frac{1}{4}$ and -0.4 using the given steps:

I. He changed $-\frac{1}{4}$ into decimal as -0.25

II. He wrote: as 0.25 is less than 0.4, so $-0.25 < -0.4$

At which step did he go wrong?

(A) I

(B) II

(C) Both I and II

(D) He is correct.

12. Googol number is a number in which one is followed by 100 zeros. Which of the following is the correct way of writing it?

(A) 10^{100}

(B) 100^{10}

(C) 10×100^{10}

(D) 100×10^{96}

13. The sides of a right angled triangle are $2a$ cm, $(2a + 2)$ cm and $(4a - 2)$ cm. If its perimeter is 24 cm, what is the length of the longest side?

(A) 8 cm

(B) 12 cm

(C) 10 cm

(D) 14 cm

14. The mean of 5 observations is 15. If the mean of the first three observations is 14 and that of the last three is 17, then find the third observation.

(A) 17

(B) 14

(C) 15

(D) 18

15. Consider the following statements.

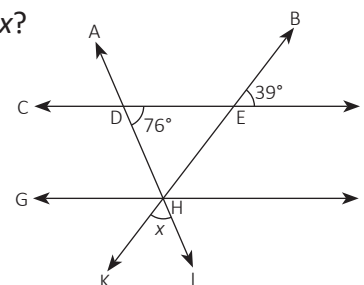
- I. When n is odd, median is the value of $\frac{(n+1)}{2}$ th term.
- II. When n even, median is the value of $\frac{1}{2}\left[\frac{n}{2}\text{th term} - \frac{n+1}{2}\text{th term}\right]$

Where n is number of terms

- (A) Both I and II are true. (B) Both I and II are false
(C) I is false, II is true. (D) I is true, II is false.

16. In the given figure, CF is parallel to GJ. What is the complement of angle x ?

- (A) 24°
(B) 46°
(C) 25°
(D) 16°



17. Kabir covers $7\frac{1}{2}$ km in one hour. What distance will he cover in $2\frac{4}{7}$ hours?

- (A) $9\frac{5}{7}$ km (B) $19\frac{2}{7}$ km (C) $19\frac{3}{7}$ km (D) $9\frac{2}{7}$ km

18. A certain sum of money amounts to ₹17400 in 2 years and ₹21000 in 5 years with the same rate of interest. Calculate the rate of interest.

- (A) 8% p.a. (B) 12.5% p.a. (C) 10% p.a. (D) 11% p.a.

19. P, Q, R, S are the decimal numbers such that,

$$P = 5.4 \times 4; Q = 2.7 \times 2.5; R = 2.6 \times 4.35; S = 0.05 \times 6.25$$

What would be the ascending order of these decimals?

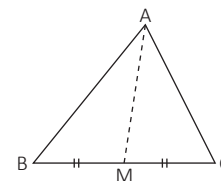
- (A) P, Q, R, S (B) S, Q, P, R (C) S, Q, R, P (D) S, R, Q, P

20. The perimeters of a square and a rectangle are equal. If their areas be A_1 and A_2 respectively, then which of the following is a true statement?

- (A) $A_1 < A_2$ (B) $A_1 \leq A_2$ (C) $A_1 > A_2$ (D) None of these

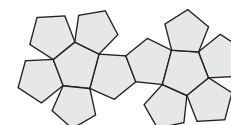
21. If AM is the median of $\triangle ABC$, then which of the following is true?

- (A) $AB + BC + CA > 2AM$
(B) $AB + BC - CA > 2AM$
(C) $AB - BC + CA > 2AM$
(D) $AB + BC + CA < 2AM$



22. How many line segments are there in the given net?

- (A) 52 (B) 49
(C) 47 (D) 51



Net of dodecahedron

23. In this magic square, the sum of every row, column and diagonal is the same. Find the value of x and y .

x	$x - 5$	8
$x + 1$	y	$y - 2$
2	9	4

- (A) $y = 6, x = 5$ (B) $x = 6, y = 5$
 (C) $x = 9, y = 6$ (D) $x = 6, y = 9$

24. $\frac{p}{q}$ will be a positive rational number if _____.

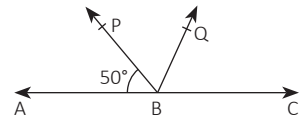
- (A) ' p ' is positive and ' q ' is negative (B) ' p ' is negative and ' q ' is positive
 (C) ' p ' and ' q ' have like signs (D) None of these

25. The price of sugar has increased by 20%. By what percentage the consumption of sugar will be reduced so that the expenditure on the sugar remains the same?

- (A) $13\frac{2}{3}\%$ (B) $11\frac{2}{3}\%$ (C) $16\frac{2}{3}\%$ (D) $12\frac{1}{3}\%$

26. In the given figure, $\angle PBA = 50^\circ$. If BQ bisects $\angle PBC$, then $\angle QBC$ is equal to

- (A) 65° (B) 75°
 (C) 130° (D) 120°

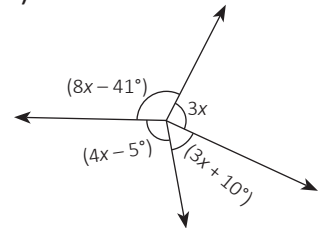


27. If a and b are respectively the sum and product of numerical coefficients of terms in the expression $9x^2 + 9xy - 7y^2 - 5y - 6x$, then value of ab is

- (A) -2 (B) 72 (C) -11 (D) 0

28. In the given figure, the value of $3x$ is _____.

- (A) 60° (B) 63°
 (C) 66° (D) 72°



Instruction: Q. 29 to 33 are two-key-based questions, having four options A, B, C, and D out of which TWO are correct.

29. If $x = \frac{3}{4}$ and $y = \frac{3}{10}$, then which of the following is always true?

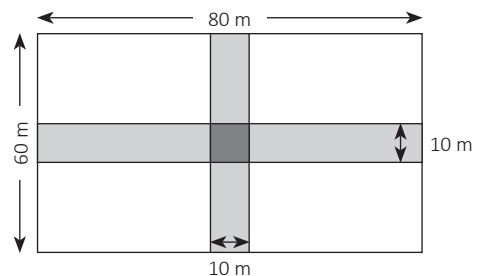
- (A) $xy < 1$ (B) $xy > 1$ (C) $x + y > xy$ (D) $\frac{x}{y} < xy$

30. Which of the following are true?

- (A) 4^9 is greater than 16^3 (B) $2^4 \div 3^4 = (2 \div 3)^{-4}$ (C) $2^4 \times 3^4 = (2 \times 3)^4$ (D) $(-3)^4 = -12$

31. A rectangular grass plot $80 \text{ m} \times 60 \text{ m}$ has two roads, running in the middle of it, one parallel to the length and other parallel to the breadth. To calculate the cost of gravelling the roads at ₹50 per square metre, which of the following is the correct method?

- (A) $(80 \times 10 + 60 \times 10 - 10 \times 10) \times 50$
 (B) $[80 \times 60 - (80 \times 10 + 60 \times 10)] \times 50$
 (C) $[10 \times (80 + 60) - 100] \times 50$
 (D) $50 \times (100 + 60 \times 10 + 80 \times 10)$



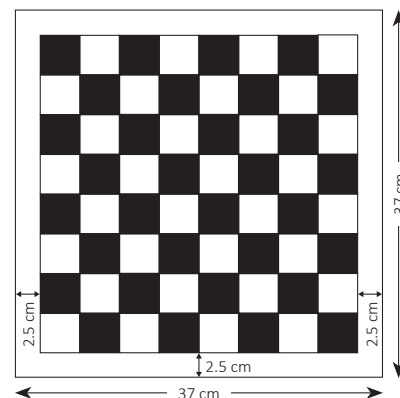
32. In which of the following cases is the construction of a triangle ABC not possible?
- (A) $AB = 5 \text{ cm}$, $BC = 7 \text{ mm}$, $AC = 5.7 \text{ cm}$ (B) $BC = 7 \text{ cm}$, $\angle B = 45^\circ$, $\angle C = 60^\circ$
- (C) $AB = 6 \text{ cm}$, $BC = 7 \text{ cm}$, $AC = 8 \text{ cm}$ (D) $\angle B = 45^\circ$, $\angle A = 65^\circ$, $\angle C = 85^\circ$
33. In each case, the solution of an equation is given in the bracket. Which of these are correct?
- (A) $4x + 5 = 25$; ($x = 5$) (B) $3x - 6 = 33$; ($x = 9$)
- (C) $2x \div 7 = 4$; ($x = 16$) (D) $\frac{3x}{4} = 27$; ($x = 36$)

Section C (Competency Enhancement)

Directions (Q. 34 to 36): During a maths activity period, three friends, Amar, Akbar and Anthony had drawn the triangles as mentioned in the given table. Observe the table and answer the questions.

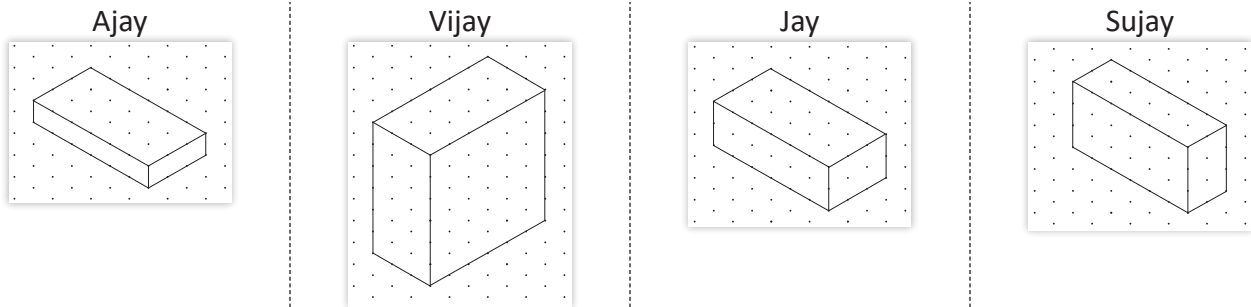
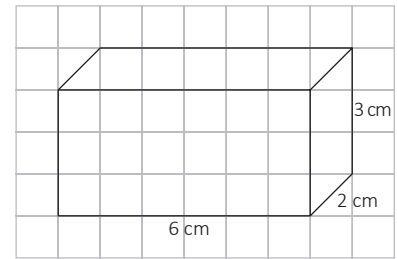
	Amar	Akbar	Anthony
Name of triangle	$\triangle PQR$	$\triangle ABC$	$\triangle XYZ$
Ratio of angles in the triangle	1 : 2 : 3	2 : 3 : 4	1 : 2 : 3

34. Which of the following statements is true?
- (A) Amar and Akbar had drawn congruent triangles.
 (B) Amar and Anthony had drawn congruent triangles.
 (C) Anthony and Akbar had drawn congruent triangles.
 (D) The given information is not sufficient to decide which triangles are congruent.
35. What type of triangle is drawn by Akbar?
- (A) Equilateral triangle (B) Acute angled isosceles triangle
 (C) Acute angled scalene triangle (D) Isosceles right-angled triangle
36. Further, Amar and Anthony measured the sides of the triangles drawn by them and observed that, $PQ = XY = 3 \text{ cm}$ and $QR = YZ$, then
- (A) $\triangle PQR$ and $\triangle XYZ$ are not congruent (B) $\triangle PQR \cong \triangle XYZ$ by AAA Rule
 (C) $\triangle PQR \cong \triangle ABC$ by SSS Rule (D) $\triangle PQR \cong \triangle XYZ$ by SAS Rule
37. Pradumnya drew a chessboard on a chart paper. He pasted it in on a square cardboard of side 37 cm by leaving a margin of 2.5 cm on each side. What is the area of each small square of the chessboard?
- (A) 64 sq cm
 (B) 2 sq cm
 (C) 16 sq cm
 (D) 8 sq cm
38. Raghu sold an article of ₹1600 by taking a profit of 5% to Madhu. Madhu sold it to Sadu at a profit of 10%. How much would Sadu pay for this article?
- (A) ₹1884 (B) ₹1838 (C) ₹1848 (D) ₹1638



39. Digvijay had drawn a cuboid with the sides as shown in the given figure.

Four of his friends tried to draw the cuboid of the same measure as drawn by Digvijay on isometric paper. Who amongst them could draw it correctly?

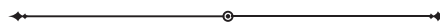


- (A) Ajay (B) Jay (C) Sujay (D) Vijay

40. Which of the given pairs of triangles in column II satisfy the condition of congruency given in column I.

Column I	Column II
(a) ASA	(i)
(b) SAS	(ii)
(c) RHS	(iii)
(d) SSS	(iv)

- (A) (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii) (B) (a)–(iii), (b)–(ii), (c)–(i), (d)–(iv)
 (C) (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii) (D) (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)



SPACE FOR ROUGH WORK