



INDIAN SCHOOL AL WADI AL KABIR

Mid Term Examination (2025-26)

Class: VIII

Sub: MATHEMATICS

Max Marks: 80

Date: 23-09-2025

Set-1

Time: $2\frac{1}{2}$ hours

General Instructions:

1. This question paper contains 4 sections, Sections A to D
2. All questions are compulsory.
3. Section A has 20 questions carrying 1 mark each.
4. Section B has 5 questions carrying 2 marks each.
5. Section C has 6 questions carrying 3 marks each.
6. Section D has 8 questions carrying 4 marks each.
7. This question paper contains 5 pages.

Section A: Multiple Choice Question (Q.1 to Q.15) of **1** mark each

1. The value of k, if $7^{k-2} \times 7^8 = 7^{10}$ is:

A 16 **B** 4 **C** 20 **D** 8

2. Multiplying $\frac{-15}{7}$ by the reciprocal of $3\frac{4}{7}$, we get:

A $\frac{-5}{3}$ **B** $\frac{-3}{15}$ **C** $\frac{-3}{5}$ **D** $\frac{3}{5}$

3. The standard form of $\frac{-84}{-126}$

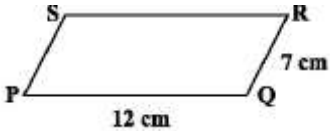
A $\frac{-2}{3}$ **B** $\frac{14}{-21}$ **C** $\frac{28}{42}$ **D** $\frac{2}{3}$

4. The value of $5^{-1} \times 2^{-1} \times 10$ is:

A 100 **B** 10 **C** 1 **D** 20

5. Number of digits in the square root of 53361 is:

A 2 **B** 3 **C** 4 **D** 1

6. The value of $\left[\left(\frac{5}{7}\right)^{-2}\right]^0$ is:
A 1 **B** 2 **C** -2 **D** 0
7. The value of $\frac{\sqrt{0.2 \times 0.2 \times 5 \times 5}}{\sqrt{7 \times 3 \times 7 \times 3}}$ is:
A $\frac{1}{21}$ **B** $\frac{10}{21}$ **C** $\frac{20}{21}$ **D** $\frac{2}{21}$
8. The square root of which of the following numbers will end with 9?
A 3025 **B** 3844 **C** 4761 **D** 5929
9. Frame the equation which represents the statement: "3 subtracted from twice of a number is equal to 18".
A $3m - 3 = 18$ **B** $3m - 2 = 18$ **C** $3 - 2m = 18$ **D** $2m - 3 = 18$
10. A bag contains 3 red balls, 5 black balls and 4 white balls. A ball is drawn at random from the bag. What is the probability that the ball drawn is white?
A $\frac{3}{4}$ **B** $\frac{4}{5}$ **C** $\frac{1}{3}$ **D** $\frac{4}{3}$
11. Name the property used: $\frac{7}{9} \times \frac{9}{7} = 1$
A additive identity **B** multiplicative inverse **C** commutativity **D** additive inverse
12. Two numbers are in the ratio 7: 3. If they differ by 16. Find the greatest number.
A 32 **B** 28 **C** 12 **D** 40
13. The perimeter of parallelogram PQRS is:
A 38cm **B** 19cm **C** 84cm **D** 36cm
14. If the measure of each exterior angle of a regular polygon is 40° , then that regular polygon has _____ number of sides.
A 10 **B** 8 **C** 9 **D** 12

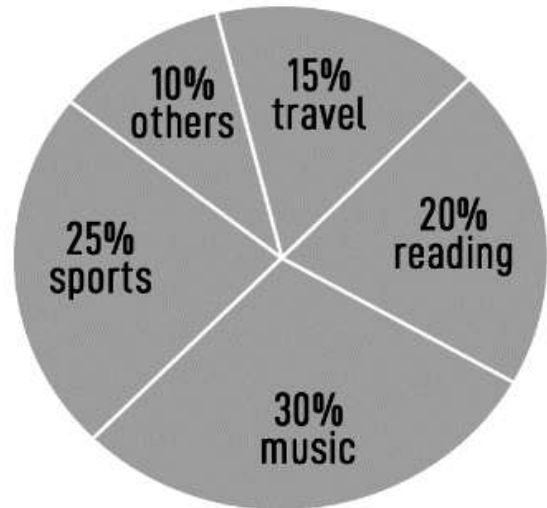
15. The solution of $5m + 9 = 5 + 3m$ is:

- A** 5 **B** -4 **C** 4 **D** -2

16. SOURCE BASED QUESTION

The adjoining pie chart shows the hobbies preferred by a group of young people in a city.

From this pie chart, answer the following questions:



I Which hobby is liked by the maximum number of young people?

- A** reading **B** music **C** sports **D** others

II If the total number of young people surveyed is 2000, how many of them prefer sports?

- A** 50 **B** 250 **C** 200 **D** 500

III If the total number of young people surveyed is 2000, measure of the angle represents reading is:

- A** 82° **B** 72° **C** 90° **D** 80°

IV How many people liked travelling, if 4200 people were involved in the survey.

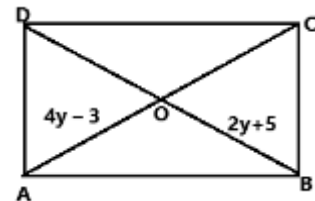
- A** 650 **B** 420 **C** 600 **D** 630

V Find the number of people liked other hobbies, if 4000 people surveyed?

- A** 500 **B** 400 **C** 600 **D** 450

Section B: Short Answer Questions (Type – 1) of **2** marks each (Q.17 to Q.21)

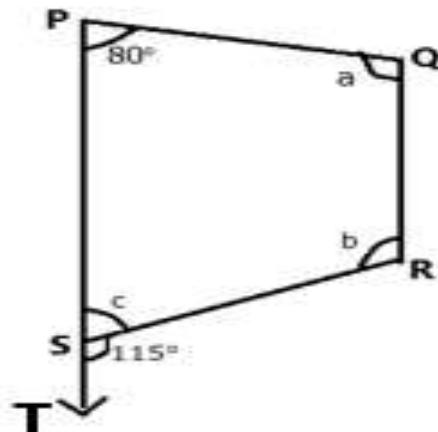
17. Represent the rational numbers $\frac{-3}{5}$, $\frac{1}{5}$ and 1 on the same number line.
18. The sum of two numbers is 85. If one exceeds the other by 25, find the numbers.
19. Evaluate: $(5^3)^{-2} \times \{5^{11} \div 5^3\} + 5$
20. Write a Pythagorean triplet whose one number is 16.
21. ABCD is a rectangle. The diagonals intersect at O. If $AO = 4y - 3$ and $OB = 2y + 5$, find the value of y .



Section C: Long Answer Questions (Type – 1) of **3** marks each (Q.22 to Q.27)

22. PQRS is a trapezium with $PS \parallel QR$, $\angle QPS = 80^\circ$ and $\angle RST = 115^\circ$ find the value of a , b and c .

State reasons for your answer.



23. Solve: a) $3(m - 3) = 5(2m + 1)$
24. Find the value using distributive property: $\left[\frac{-5}{11} \times \frac{4}{9}\right] + \left[\frac{-5}{11} \times \frac{5}{18}\right]$
25. The members of a sports club decided to buy new jerseys. Each member contributed as many rupees as the number of members in the club. If the total contribution was ₹7056, find the number of members in the club.
26. Simplify using the laws of exponents: $\frac{81^{-1} \times 10^6 \times m^{-2}}{3^{-4} \times 125 \times m^{-5}}$
27. Find the square root of 1936 by division method.

Section D: Long Answer Questions (Type – 2) (Q.28 to Q.33) & Case study (Q.34 & 35) of **4** marks each

28. Find the value of $\left[\left(\frac{3}{5}\right)^{-2}\right]^3 \times \left[\left(\frac{5}{3}\right)^{-2}\right]^3 + \left[\frac{1}{7}\right]^{-2} - \left[\frac{1}{5}\right]^{-2}$

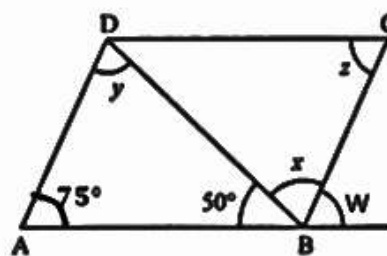
29. Check the number 6480 is a perfect square number or not. If not, find the smallest number by which it must be divided so that the quotient is a perfect square. Find the square root of the quotient obtained.

30. Find any four rational numbers between $\frac{-7}{8}$ and $\frac{-8}{9}$.

31. The sum of three consecutive multiples of 11 is 231. Find these multiples. Frame an algebraic equation and solve it.

32. ABCD is a parallelogram. Find the value of w, x, y and z

Given: $\angle DAB = 75^\circ$ and $\angle DBA = 50^\circ$



33. A library has 200 story books in different categories as shown below. Draw a pie chart to represent the distribution of books.

Category	Adventure	Mystery	Fantasy	Science fiction	historical
Number of books	35	55	50	40	20

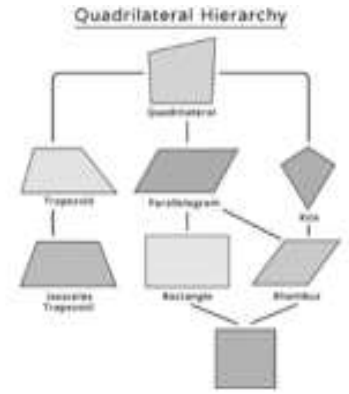
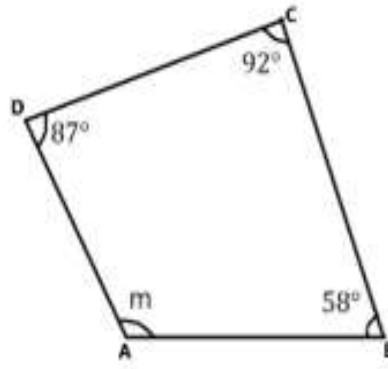
34. Amit, Suni, and Sreenu decided to play a probability game. Each correct answer would earn **5 points**. Amit brought a spinning wheel with the **VIBGYOR** colours. Suni brought a box of number strips from and Sreenu brought **two fifty-paisa coins**. They took turns playing, while the others asked probability-based questions. Some of their questions are given below. Help them to find the answers.



- Amit spins the colour wheel painted with VIBGYOR colours. What is the probability that the wheel stops at green? (1m)
- Sreenu tosses two fifty-paisa coins simultaneously. What is the probability of getting **two heads** at the same time? (1m)
- Suni draws a strip at random from a well-shuffled box containing number strips from **9 to 20**. What is the probability that the number is a **multiple of 3**? (2m)

35. Case Study-2

A group of students were drawing a chart based on the topic of properties of quadrilaterals. They were writing different properties of few quadrilaterals and asking questions each other. Few of their figures are given below. Answer the following questions on the basis of each figure .



- i) Name the quadrilaterals whose diagonals are of equal length. (1m)
- ii) If each interior angle of a regular polygon measures 135° , find the measure of its each exterior angle. (1m)
- iii) ABCD is a quadrilateral. Find the value of 'm'. (2m)
