विद्या सर्वार्थि साधिका

ANANDALAYA

PERIODIC TEST – 2

Class: VII

Subject: Mathematics M.M: 50

Date : 11– 09 – 2025 Time: 2 Hr

General Instructions:

i) This question paper contains 24 questions.

ii) This question paper is divided into 4 sections – A, B, C and D.

iii) In Section-A, Questions 1 – 9 are multiple choice questions (MCQ) each of 1 mark.

iv) In Section-B, Questions 10 – 16 are very short-answer type questions carrying 2 marks each.

v) In Section-C, Questions 17 – 21 are short -answer type questions carrying 3 marks each.

vi) In Section D, Question 22 to 24 are long answer type questions carrying 4 marks. However, there is one case study-based question carrying 4 marks with subparts of values of 1, 1 and 2 mark each respectively.

vii) All questions are compulsory. However, an internal choice of 3 questions of 2 marks; 3 questions of 3 marks and 2 question of 4 marks has been provided.

SECTION-A

1. The additive inverse of 6 is _____ (1)

   (A) $\frac{1}{6}$ (B) $-\frac{1}{6}$ (C) -6 (D) 0

2. Which of the following does not represent an integer? (1)

   (A) $12 \div 0$ (B) $-12 \div 3$ (C) $0 \div (-20)$ (D) $20 \div (-5)$

3. Which of the following shows the maximum rise in temperature? (1)

   (A) $23°$ to $32°$ (B) $-10°$ to $2°$ (C) $-18°$ to $-11°$ (D) $-5°$ to $5°$

4. The mode of the data 23, 26, 22, 29, 23, 29, 26, 29, 22, 23 is _____. (1)

   (A) 23 and 29 (B) 23 (C) 29 (D) 26

5. On adding 9 to twice of a whole number the result is 31. The whole number is _____. (1)

   (A) 21 (B) 20 (C) 15 (D) 11

6. The angle equal to its complement is _____. (1)

   (A) $45°$ (B) $90°$ (C) $60°$ (D) $180°$

7. In triangle ABC, the measure of $\angle A = 50°$, $\angle B = 30°$. Find the measure of the exterior angle $\angle ACD$. (1)

   (A) $100°$ (B) $80°$ (C) $50°$ (D) $180°$

8. The measure of each angle of an equilateral triangle is _____. (1)

   (A) $45°$ (B) $90°$ (C) $60°$ (D) $50°$

9. A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following options. (1)

   Assertion (A): The supplement of $105°$ is $75°$.

   Reason (R): If the sum of two angles is $180°$, then the angles are supplementary.

   (A) Both A and R are true and R is the correct explanation of A

   (B) Both A and R are true but R is not the correct explanation of A

   (C) A is true but R is false

   (D) A is false but R is true

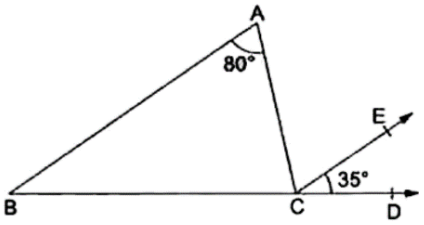
SECTION-B

10. **A school planned to plant 100 trees in a month. In the first week, they planted 40 trees, but due to heavy rains in the second week, 10 saplings got damaged. Represent the progress using integers and find how many more trees need to be planted. What value does the school promote through this activity?** (2)

11. Two parallel lines *l* and m are cut by a transversal *t*. If the interior angles of the same side of *t* be $(2x - 8)°$ and $(3x - 7)°$, find the measure of each of these angles. (2)

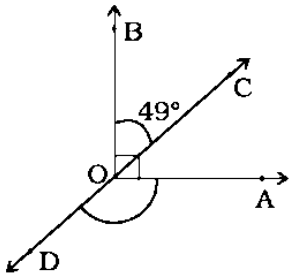
OR

In the adjoining figure, CE ∥ BA, ∠BAC = 80° and ∠ECD = 35°. Find ∠ACE and ∠ACB



12. One biscuit packet requires $2\frac{1}{2}$ cups of flour and $1\frac{2}{3}$ cups of sugar. Find the total quantity of both the ingredients used in 10 such biscuit packets. (2)

13. In the adjoining figure, OB is perpendicular to OA and ∠BOC =49°. Find ∠AOD. (2)

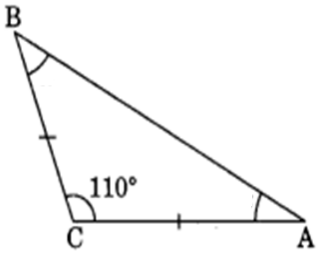


14. The weight of 9 students (in kg) are given: 41, 52, 34, 47, 31, 35, 48, 41, 34 (2)
Find the mode and the median weight.

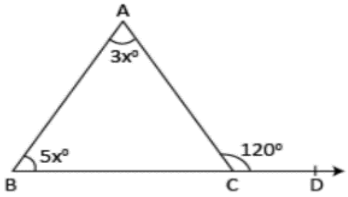
OR

Runs scored by a batsman in 7 consecutive innings are 58, 76, 41, 0, 35, 100, 47.
a) What is the average of the runs scored by the batsman?
b) How many times did the batsman score less than the average of runs scored?

15. In ΔABC, AC = BC and ∠C = 110°. Find ∠A and ∠B. Also draw the altitude for this triangle from the vertex B. (2)

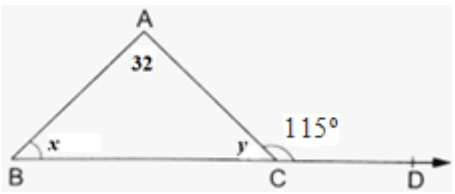


16. One side of a triangle is produced and the exterior angle so formed is 120°. If the interior opposite angles be in the ratio 3:5, find the measure of each angle of the triangle. (2)



OR

In the adjoining figure, in ΔABC, BC is produced to D. ∠ACD = 115° and ∠CAB = 32°, find ∠ABC and ∠ACB.



SECTION-C

17. A multi-storey building has 25 floors above the ground level each of height 5m. It also has 3 floors in the basement each of height 5m. A lift in the building moves at a rate of 1m/s. Mr. Krishnakant wants to reach the 2nd floor of the basement. He is 50m above the ground. (3)

a) On which floor of the building is Mr. Krisknakant?

b) How long will it take him to reach at 2nd floor of the basement?

OR

In a test, +3 marks are given for every correct answer and -1 mark are given for every incorrect answer. Sona attempted all the questions and scored +20 marks though she got 10 correct answers.

a) How many incorrect answers has she attempted?

b) How many questions were given in the test?

18. Divide: (3)

a) $6\frac{7}{8} \div \frac{11}{16}$ b) $0.8085 \div 0.35$

19. The marks obtained by a student in various subjects in first term and the second term out of 100 in each test is given below: (3)

Subject / Marks obtained in	English	Hindi	Mathematics	Science
First Term	65	70	88	82
Second Term	67	68	94	85

Draw a double bar graph to show the above data.

20. Solve the following equations: (3)

(a) $8x - 3 = 9 - 2x$

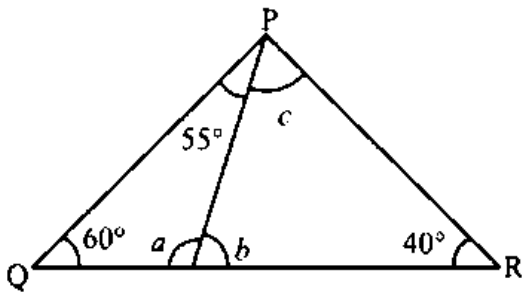
(b) $3x + 3(x + 1) = 69$

(c) $2x - \frac{1}{3} = \frac{1}{5} - x$

21. Is it possible to draw a triangle of lengths 7cm, 8cm and 15cm? Give reason for your answer. If two sides of a triangle are 4 cm and 7 cm, then what can be the possible measures of length of its third side? (3)

OR

Observe the adjoining figure and find the value of a, b and c.



SECTION-D

22. (A) Two equal sides of a triangle are 5m less than twice the third side. If the perimeter is 55m, find the lengths of its sides. (4)

(B) The sum of two consecutive natural numbers is 63. Find the numbers.

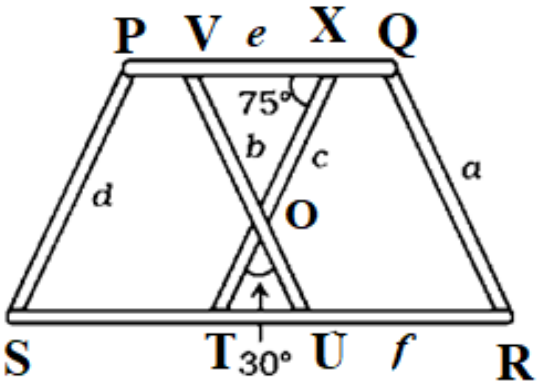
23. Iron rods a, b, c, d, e and f are making a design in a bridge as shown in the figure in which $a \parallel b,\ c \parallel d,\ e \parallel f$. Find the following angles and justify your answer: (4)

(a) ∠VOX

(b) ∠PST

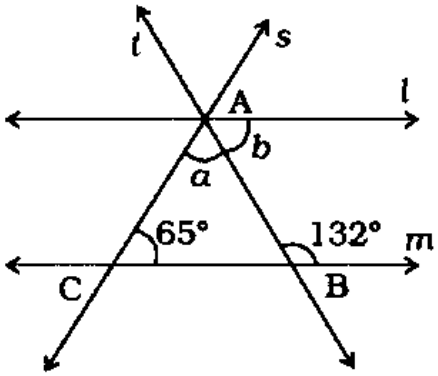
(c) ∠VUR

(d) ∠QRU



OR

(A) In the adjoining figure, if $l \parallel m$, find the values of a and b.



(B) Can two acute angles form a pair of supplementary angles? Give reason to support your answer.

24. Phoenix football stadium has 3500 seats. At a recent football match Sam estimated that $\frac{3}{5}$ of the stadium was full and Amjed estimated that it was $\frac{3}{4}$ full. The ticket office reported a total sale of 2568 tickets. They sold the tickets at ₹201.50 per ticket. (4)

(a) How many seats of the stadium was occupied as per Sam?

(b) Express $\frac{3}{5}$ in decimals.

(c) Whose estimate was closer to the actual number?

OR

(c) Calculate the total amount of money collected by the ticket office.