ANANDALAYA
PERIODIC TEST – 2
Class : VII

Subject: Mathematics   M.M: 50
Date   : 21/09/2024   Time: 2 Hours

General Instructions:
(1) This question paper contains 24 questions. All questions are compulsory.
(2) This question paper is divided into 4 sections – A, B, C and D.
(3) In Section-A, Questions 1 – 9 are multiple choice questions (MCQ's) each of 1 mark.
(4) In Section-B, Questions 10 – 16 are very short answer type questions carrying 2 marks each.
(5) In Section-C, Questions 17 – 21 are short answer type questions carrying 3 marks each.
(6) In Section D, Question 22 – 24 are long answer type questions carrying 4 marks each.
(7) There is no overall choice. However, an internal choice has been provided in 3 questions in Section- B, 2 questions in Section-C and 1 question in Section-D.
(8) Question 22 – 24 in Section D are long-answer type questions carrying 4 marks each. However, one is a case study based question carrying 4 marks with subparts are of 1, 1 and 2 marks respectively.
(9) Use of calculator is not allowed.

Section-A

1. Product of two numbers is -5. If one of them is 1, the other is _____.   (1)
    (A)   -5   (B)   5   (C)   1   (D)   -1

2. The value of $26.3 \div 1000$ is _____   (1)
    (A)   0.0263   (B)   0.2630   (C)   26300   (D)   26.30

3. The data below shows the number of balls a batsman played in the past 6 innings.   (1)
        18,   36,   8,   16,   18,   30
    What is the mean number of balls the batsman faced in an inning?
    (A)   36   (B)   21   (C)   126   (D)   15

4. The tally chart below displays the height (in cm) of a group of students.   (1)

Height of students (in cm)	158	161	162	165	170	171
Tally Marks	卌	卌 ||	卌 ||||	卌 ||||	|||	||

    How many students have height between 160 cm and 166 cm?
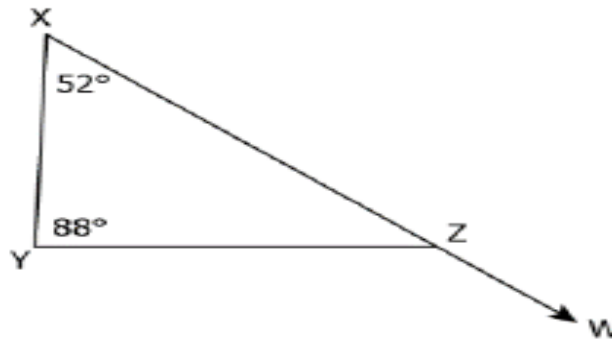   (A) 34   (B)   25   (C)   24   (D)   29

5. Which of these is a solution for the equation $-x - 12 = -20$?   (1)
    (A)   8   (B)   -8   (C)   32   (D)   -32

6. What is the measure of the supplement of 54°?   (1)
    (A)   41°   (B)   49°   (C)   36°   (D) 126°

7. Observe the figure given. Which of the following line segments is the median of ΔMNS? (1)

M

N O 2 cm P 3 cm Q 4 cm R 2 cm S

⊢—⊣
1 cm
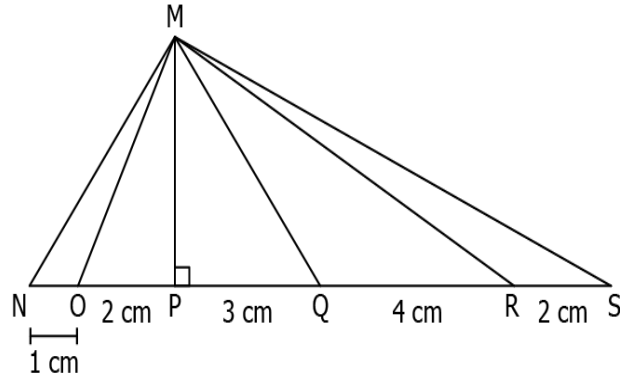
(A) $\overline{MP}$ (B) $\overline{MO}$ (C) $\overline{MR}$ (D) $\overline{MQ}$

8. Find the measure of ∠YZW. (1)

X
52°
88°
Y
Z
W

(A) 36°   (B) 40°   (C) 140°   (D) 144°

9. A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct (1)
   answer out of the given choices.
   Assertion (A) : The complement of 15° is 75°
   Reason (R)   : Two angles are said to be complementary if the sum of their measures is 90°.
   (A) Both A and R are correct and R is the correct explanation for A.
   (B) Both A and R are correct and R is not the correct explanation for A.
   (C) A is true but the R is false.
   (D) Both A and R are false.

Section-B

10. In a quiz, team A scored -45, 20, 0, team B scored 30, – 50, 10 and team C scored 0, – 20 and (2)
    30. Which team performed the best?

11. Which of the following is the greatest, A or B or C? (2)
    (A) $(-4) \times (-2) \times (-1)$
    (B) $(4) \times (-2) \times (-1)$
    (C) $(40) \times (-2) \times 0 \times (-1)$

OR

Find the product using suitable rearrangement: $(-40) \times 4 \times 125$
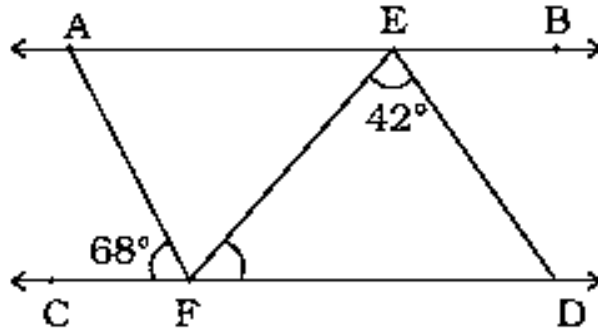
12. Find the area of the rectangle whose sides are 2.36 m and 4.02 m. (2)

OR

The weight of 25 packets of butter is 6.25 kg. Find the weight of 1 packet?

13. Solve for x : $22 - 3x = 1$ (2)

14. In an isosceles triangle, the vertex angle is twice either of the base angles. Find the angles of the triangle. (2)

15. In the given figure, $\overline{AB} \parallel \overline{FD}$, $\overline{AF} \parallel \overline{ED}$, ∠AFC = 68° and ∠FED = 42°. Find ∠EFD. (2)

16. The diagonals BD and AC of a rhombus ABCD measure 24 cm and 10 cm respectively. Find the side of the rhombus. (2)
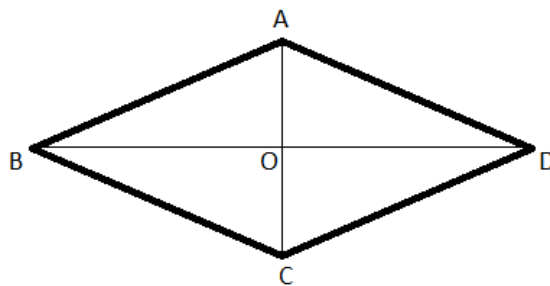

OR

Is it possible to have a triangle with sides 4cm, 5cm and 6 cm? Justify.

Section-C

17. Verify the following: $28 \times \{10 + (-7)\} = \{28 \times 10\} + \{28 \times (-7)\}$. (3)

18. (A) By what fraction should $5\frac{7}{9}$ be multiplied to get the product as 1? (3)

   (B) Evaluate: $7 \div 4\frac{2}{3}$.

19. (A) Each side of a regular polygon is 3.5cm. If its perimeter is 17.5 cm, find the number of sides of polygon. (3)

   (B) The lengths of two sides of the triangle are 6 cm and 8 cm. Between which two numbers can length of the third side fall?

   (C) An exterior angle of a triangle is of measure 113° and one of its opposite interior angles is of measure 25°. Find the measure of the other opposite interior angle

20. In the adjacent figure, $l \parallel m \parallel n$. Also, p and q are parallel lines. Find the value of 'a', 'b' and 'c'. (3)
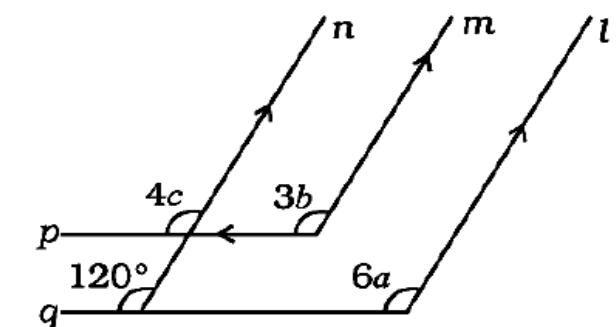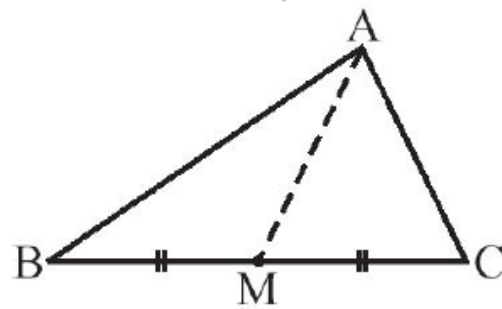

OR

(A) Find the complement of $\frac{2}{3}$ of right angle.

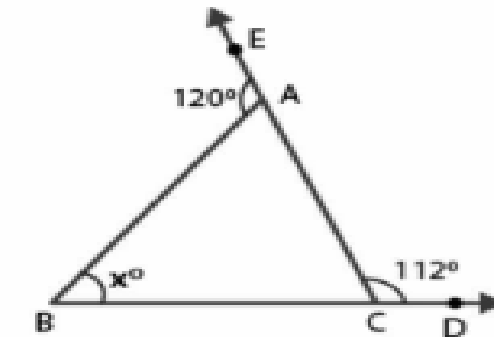(B) Find the measure of the angle which is 32° less than its complement.

21. Prove that if AM is a median of ΔABC, then AB + BC + CA > 2AM. (3)

OR

Compute the value of 'x'.

Section-D

22. Number of copies of newspapers sold by The Hindu and Economics Times from 2020 to 2023 is shown below. Draw a double bar graph choosing appropriate scale. (4)

No. of copies of newspapers sold (in thousands)	2020	2021	2022	2023
The Hindu	40	80	60	70
Economics Times	70	55	40	30

OR

The given data shows the attendance of Class VII for 11 days. Study the data carefully and find the mean, median and the mode for the given data.

25,   22,   28,   16,   24,   30,   21,   26,   24,   24,   24

23. Dishank says that he has 7 marbles more than five times the marbles Karan has. Dishank has 37 marbles. How many marbles does Karan have? Anuj has twice the number of marbles than that Karan has. Find the number of marbles with Anuj. (4)

24. Fence of the tennis court is supported by a pole as shown in the adjoining picture. Length of the supporting pole AB is 5 ft and it touches the fence at B, 4 ft from the ground.
    (i) How far away is the base of the supporting pole from the fence?
    (ii) Which property is used to find the distance AD?
    (iii) Check if 5cm, 12 cm and 13 cm can be the sides of a right-angled triangle.