विद्या सर्वार्थि साधिका

ANANDALAYA

PERIODIC TEST – 2

Class : VIII

Subject: Mathematics M.M: 50

Date : 20/09/20222 Time: 2 Hours

General Instructions:

i) All questions are compulsory.

ii) This question paper contains 24 questions.

iii) Questions 1 – 9 in Section A are very short answer type questions carrying 1 mark each.

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

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

vi) Questions 22 – 24 in Section D are long-answer type questions carrying 4 marks.

SECTION-A

1. Write if the statement is True or False: (1)
   The rational number $\frac{-18}{-13}$ lies on the left of 0 on the number line.

2. Which of the following is not a linear equation in one variable? (1)
   a) $2x + 3 = 5$
   b) $x^2 + 2 = 18$
   c) $\frac{x}{5} - 1 = 7$

3. In a square ABCD, AB = $(2x + 3)$cm and BC = $(3x - 5)$ cm. Then, find the value of x. (1)

4. Is it possible to construct a quadrilateral ABCD in which AB = 3cm, BC = 4cm, DA = 5.9cm and diagonal AC = 8cm? Give reason for your answer. (1)

5. How many natural numbers are between 11^2 and 12^2? (1)

6. Name any two quadrilaterals in which diagonals are equal. (1)

7. What is the sum of all the angles of a pentagon? (1)

8. In a frequency distribution with classes 0 – 10, 10 – 20 and so on, what is the lower limit of fourth class? (1)

9. Which of the following cannot be a perfect square? (1)
   841 529 628

SECTION-B

10. Rearrange by using suitable property and simplify: (2)
$$\frac{4}{7} + \frac{-8}{9} + \frac{-5}{21} + \frac{1}{3}$$

11. A chord of length $71\frac{1}{2}$ m has been cut into 26 pieces of equal length. What is the length of each piece? (2)

12. Find the number of sides of a regular polygon whose each interior angle is $135°$. What is the name of this polygon? (2)

13. Diagonal QS of rhombus PQRS is equal to one of its side RS. Find the angles of PQRS. (2)

14. If one side of a square is increased by 2metres and the other side is decreased by 2metres, a rectangle of perimeter 48 m is formed. Find the side of the square. (2)

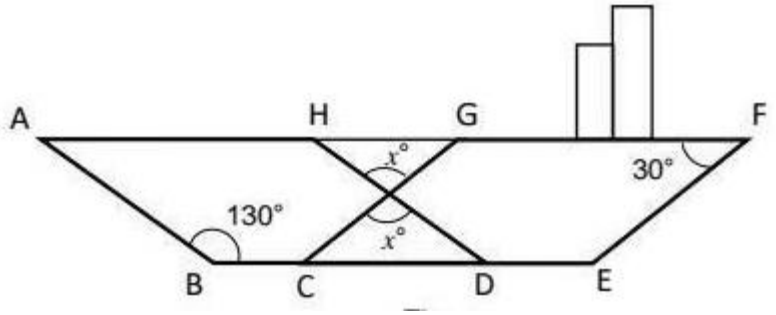
15. Is 176 a perfect square? Find the smallest number by which it should be multiplied to get a perfect square? (2)

16. Find the square root of 27556 by long division method. (2)

SECTION-C

17. The numerator of a fraction is 3 less than its denominator. If the denominator is increased by 5 and the numerator by 2, we get the fraction as $\frac{1}{2}$. Find the fraction. (3)

18. In the following figure of a ship, ABDH and CEFG are two parallelograms. Find the value of x. (3)



19. Construct a parallelogram POUR in which, PO = 5.5cm, OU = 7.2cm and ∠O = 70°. (3)

20. In the time table of a school, periods allotted per week to different teaching subjects for class VIII are given below: (3)

Subjects	Hindi	English	Maths	Science	Social Science	Computer	Gujarati
Periods Allotted	5	7	8	8	6	1	1

Represent this data on a pie chart.

21. The weights (in gram) of 30 mangoes picked at random from a consignment are as follows: (3)

30, 40, 45, 32, 43, 50, 55, 62, 70, 70,
61, 53, 52, 50, 42, 35, 37, 53, 55, 65,
70, 73, 45, 46, 58, 59, 60, 62, 74, 34.

Prepare a frequency distribution table and represent the data using a histogram.

SECTION-D

22. Answer the following: (4)

a) Which rational number is its own additive inverse?

b) Write the additive inverse of: i) $\frac{-8}{-7}$ ii) $\frac{1}{3}$.

c) What is the product of a rational number and its reciprocal?

d) Write the reciprocal of $\frac{0}{2}$.

23. Solve: (4)

a) $5x - \frac{1}{3}(x+1) = 6\left(x + \frac{1}{30}\right)$.

b) $\frac{2-9z}{17-4z} = \frac{4}{5}$.

24. a) Construct a square PQRS in which one of the diagonal is 6cm length. (4)

b) To construct a unique rectangle how many measurements are required? Justify your answer.