विद्या सर्वार्थ साधिका

ANANDALAYA

PERIODIC TEST – 1

Class : VIII

Subject: Mathematics M.M: 40

Date : 18 - 07- 2025 Time: 1Hr. 30 min.

General Instructions:

i) All questions are compulsory.

ii) This question paper contains 20 questions.

iii) Questions 1 – 7 in Section A are questions carrying 1 mark each.

iv) Questions 8 – 15 in Section B are short-answer type questions carrying 2 marks each.

v) Questions 16 – 18 in Section C are short -answer type questions carrying 3 marks each.

vi) Question 19 and 20 in Section D are long-answer type question carrying 4 marks each. However, one is a case study based question carrying 4 marks with subparts of values of 1, 1 and 2 mark each respectively.

SECTION-A

1. Which of the following is a linear equation in one variable? (1)

(A) $2^x = 5$ (B) $x^2 + 2x + 1 = 3$ (C) $7x - \frac{y}{3} = 3$ (D) $4z + 5 = 1$

2. What should be added to thrice the number $\frac{-7}{9}$ to get $\frac{2}{3}$? (1)

(A) 3 (B) $\frac{25}{9}$ (C) $\frac{25}{27}$ (D) $\frac{13}{9}$

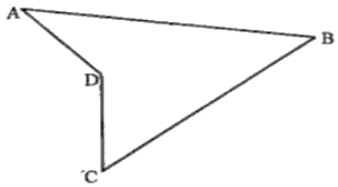
3. The ratio of two numbers is 7 : 5 and their difference is 18. Find the numbers. (1)

(A) 61, 43 (B) 62, 44 (C) 63, 45 (D) 64, 46

4. Each angle of a rectangle is: (1)

(A) 30° (B) 60° (C) 90° (D) 120°

5. What is the sum of the measures of all the internal angles of the given quadrilateral? (1)



(A) 180° (B) 360° (C) 540° (D) 720°

6. What is the name of the quadrilateral if all the sides of a quadrilateral are of equal length and one of the internal angles is 90°.. (1)

(A) trapezium (B) square (C) rectangle (D) kite

7. 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 reciprocal of the product of $\frac{-16}{17}$ and 0 is zero.

Reason (R) : A number divided by zero is not defined.

(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

8. Use the suitable property and solve: $\left(\frac{2}{5} \times \frac{4}{5}\right) + \left(\frac{-3}{10} \times \frac{2}{5}\right)$. (2)

9. Solve: $9x + 5 = 3(5x - 8) + 47$ (2)

10. Find the value of y for: $\frac{6y}{5} + 4 = \frac{9y}{15} + \frac{17}{5}$. (2)

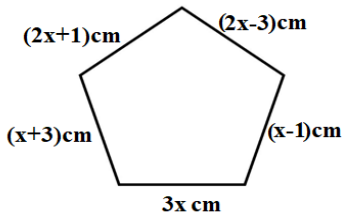
11. The product of two numbers is $\frac{-28}{81}$. If one of the number is $\frac{14}{27}$ then find the other number. (2)

OR

What should be added to $\frac{-3}{5}$ to get $\frac{2}{3}$?

12. Solve: $\frac{4x}{5-3x} = -81$. (2)

13. Observe the pentagon shown in the adjoining figure. Its perimeter is 81 cm. Find the value of x. (2)



OR

The sum of four consecutive multiples of 7 is 126. Find the multiples.

14. Is there any regular polygon with the measure of each internal angle equal to 25°. Justify your answer. (2)

15. In a parallelogram, one angle is $\frac{4}{5}$ of its adjacent angle. Find the measure of each adjacent angles. (2)

SECTION-C

16. Evaluate using suitable properties: $\frac{3}{7} \times \frac{-5}{8} - \frac{1}{6} \times \frac{3}{2} + \frac{13}{8} \times \frac{3}{7}$ (3)

OR

Solve the following:

(i) Write the multiplicative inverse of $\frac{5}{9} \times \frac{-3}{25}$.

(ii) Multiply $\frac{4}{7}$ by the reciprocal $\frac{-8}{35}$.

(iii) Find the quotient of $\frac{15}{17} \div \frac{45}{34}$.

17. The length and breadth of a rectangular field are in the ratio of 5: 3. The cost of fencing the field at the rate of ₹ 75 per metre is ₹ 60000. What are the dimensions of the field? (3)

OR

Present age of Uma's father is twice the present age of Uma. After 7 years, the sum of their ages would be 59 years. Find their present ages.

18. Write the answer for the following: (3)

(A) The multiplicative inverse of: i) -13 ii) $\frac{7}{19}$

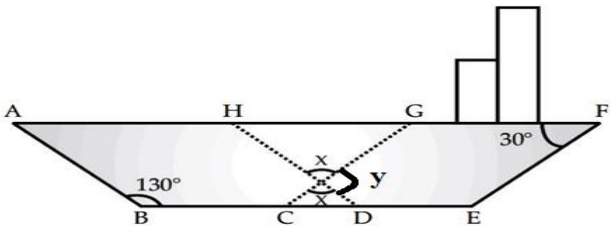
(B) The additive inverse of : i) $\frac{8}{11}$ ii) $\frac{1}{-6}$

(C) Write the numbers, which are their own reciprocals.

SECTION-D

19. Find the value of m for: $\frac{2m-7}{8} - \frac{4m+5}{16} = \frac{61}{16} + m$. (4)

20. The adjoining figure is a model of a steel ship. The portion of the ship made with different shapes is shown with dotted lines. Answer the following: (4)



(i) In the quadrilateral ABDH, ∠B and ∠H are equal also; the opposite sides are equal and parallel. Is ABDH a parallelogram?

(ii) In the quadrilateral CEFG, the opposite sides are equal and parallel and ∠F and ∠G are supplementary. Is CEFG a parallelogram?

(iii) (a) Find the measure of angle x. **OR** (b) Find the measure of angle y