GRADE: VIII **MARKS: 50**
SUBJECT: MATHS **TIME: 2 Hrs**

Section A

This section comprises of Multiple choice question (MCQs) *(1mark each)*

1. The value of $\frac{-6}{7} \div \frac{24}{49}$ is equal to _____.
   a. $\frac{-5}{7}$ b. $\frac{-7}{4}$ c. $\frac{7}{5}$ d. $\frac{4}{7}$

2. Find the multiplicative inverse of $\frac{8}{51}$
   a. $\frac{-8}{51}$ b. $\frac{51}{8}$ c. $\frac{8}{-51}$ d. 1

3. Name the property that allows you to compute $\frac{-7}{9} + \frac{4}{5} = \frac{4}{5} + \frac{-7}{9}$
   a. Additive identity b. Commutativity c. Associativity d. Multiplicative identity

4. _____ is not associative for integers.
   a. Multiplication b. Subtraction c. Division d. Both b and c

5. $\left(\frac{-2}{5} \times \frac{1}{5}\right) \times x = \frac{-2}{5} \times \left(\frac{1}{5} \times \frac{-2}{7}\right)$: $x =$ _____
   a. $\frac{3}{4}$ b. $\frac{1}{5}$ c. $\frac{-2}{7}$ d. 1

6. The additive identity for rational numbers is _____ .
   a. -1 b. 1 c. 0 d. None of these

7. What is the name of the regular polygon of 6 sides ?
   a. Triangle b. Square c. Hexagon d. Octagon

8. How many sides does a regular polygon have if the measure of an exterior angle is 45° ?
   a. 13 b. 8 c. 9 d. 5

9. If ∠A and ∠B are two adjacent angles of a parallelogram. If ∠A = 70°, then ∠B = ?
   a. 70° b. 180° c. 110° d. 90°

10. A triangle has ____ number of diagonals.
    a. 2 b. 3 c. 0 d. 1

11. The adjacent angles of a parallelogram are _____.
    a. Complementary b. Supplementary c. Identical d. Parallel

12. The sum of the measures of the exterior angle of a regular polygon of 9 sides is
    a. 30° b. 40° c. 60° d. 45°

13. The statement 'on adding 25 to a number gives 50' forms the equation
    a. x – 25 = 50 b. x + 25 = 50 c. 25x = 50 d. $\frac{x}{25} = 50$

14. Find the solution of $2x – 3 = 7$
    a. 5 b. 7 c. 2 d. 3

15. The perimeter of the rectangle is 20cm. If the length of the rectangle is 6cm, then its breadth will be __.
    a. 4 b. 6 c. 10 d. 14

16. The age of the father is three times the age of the son. If the age of the son is 15 years old, then the age of the father is
    a. 50 years b. 55 years c. 40 years d. 45 years

17. What do we get when we transpose $\frac{5}{2}$ to RHS in the equation $\frac{x}{4} + \frac{5}{2} = \frac{-3}{4}$?
    a. $\frac{x}{4} = \frac{-3}{4} + \frac{5}{2}$ b. $\frac{x}{4} = \frac{-5}{2} + \frac{3}{4}$ c. $\frac{x}{4} = \frac{-3}{4} - \frac{5}{2}$ d. None of these

18. The difference between the two numbers is 30. If the bigger number is x, then what is the smaller number?

    a. x − y = 30   b. 30x   c. 30 − x   d. x − 30

19. By multiplying $\frac{7}{6}$ by the reciprocal of $\frac{-7}{18}$ we get _____.

    a. 3   b. -3   c. $\frac{-1}{3}$ d. $\frac{-3}{7}$

20. In a _____, diagonals bisect each other

    a. Rhombus   b. Rectangle   c. Square   d. Parallelogram

Section B
This section comprises of very short answer type questions   *(2 marks each)*

21. Represent of number line $\frac{5}{4}$ and $\frac{11}{7}$
22. What is the sum of the measures of the angles of a convex quadrilateral? Show with one example of convex quadrilateral.
23. How many sides does a regular polygon have if the measure of an exterior angle is 24° ?
24. Solve 13x − 4 = 9x + 10

Section C
This section comprises of short answer type questions   *(3 marks each)*

25. Find the angle measure x in the adjoining figure.
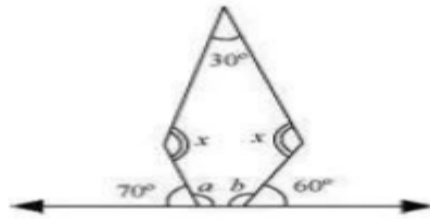
26. Find the value of x in $\frac{2x}{3} + 1 = \frac{7x}{15} + 3$ and check your result.

27. Using appropriate properties simplify $\frac{4}{5} \times \frac{-3}{8} - \frac{3}{8} \times \frac{1}{4} + \frac{19}{20}$

Section D
This section comprises of Long answer type questions   *(5 marks each)*

28. The cost of two T-shirts and three shirts is ₹705. If the T-shirt costs ₹40 more than the shirt, find the cost of the T-shirt and the shirt.
29. Find the measure of ∠P and ∠S, if $\overline{SP}$ ∥ $\overline{RQ}$ in the following figure.
    If you find m ∠R, is there more than one method to find m ∠P.
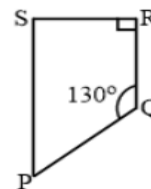
Section E
This section comprises of Case study type question   *(3 marks each)*

30. Three students Myra, Sahana and Anita are roommates. Together they have 80 books. Myra has 5 more than Sahana and Anita has 10 more than Myra.

    (a)Which of the following equation is correct
    (i) 3x + 15=80   (ii) x +x+5+x+10=80   (iii) 3x-80=15   (iv) x+x+5+x+15=80

    (b) Find the number of books each one has.