JSUNIL TUTORIAL,SAMASTIPUR
8TH MATHS SUMMETIVE TEST -1

Time: $2\frac{1}{2}$ hrs. **Section - A (1 mark questions)** **FM: 80**

1. Between any two rational numbers, there lie:

a) Two rational number b) No rational number c) infinite rational numbers d) infinite fractions

2. An equation of the form ax + b = c, where a, b and c are numbers, $a \neq 0$ and x is the variable; represents a

a) Linear equation b) linear equation in one variable c) linear equation in two variables d) None of these

3. In a linear equation, the highest power of the variables:-

a) One b) two c) Three d) Zero

4. The diagonals of a quadrilateral bisect each other at right angle, the

(1) Rhombus (ii) Rectangle (iii) parallelogram (iv) none of these

5. The sum of the exterior angles of any polygon is :

a) 180° b) 360° c) 90° d) 60°

6. The opposite angles of a..... are equal.

a) Parallelogram b) Rhombus c) Trapezium d) None of these

7. The number of zeros in the square of 400 will be

(a) 2 (b) 1 (c) 3 (d) 4

8. The cube of a negative number is

(a) Always positive (b) always negative (c) may be positive or negative (d) none of these

9. The symbol $\sqrt[3]{}$ denotes

(a) Cube root (b) cube (c) square (d) square root.

10. The reciprocal of $\left|-\frac{3}{2}\right|$

(i) $-\frac{3}{2}$ (ii) $\frac{3}{2}$ (iii) $-\frac{2}{3}$ (iv) $\frac{2}{3}$

Section- B (2 marks questions)

11. The price of sugar goes up by 20% by how much % must one consumption so that expenditure does not increase?

12. Write four rational numbers which are greater than - 3 and less than 4.

13. The perimeter of a rectangle is 52 cm. If its width is 2cm more than one-third of its length, find the dimensions of the rectangle.

14. How many numbers lie between squares of 30 and 31?

15. Find the single discount equivalent to two successive discounts of 20% and 10%.

Section- C (3 marks questions)

16. Factorise (i) (a - b) ² + 6 (a - b) + 8 (ii) If $x + \frac{1}{x} = \sqrt{5}$ find the value of x² + $\frac{1}{x^2}$

17. Find the smallest number by which 3456 must be divided so that the quotient becomes a perfect cube. Find the cube root of the quotient.

18. The difference between the compound interest and the simple interest on a certain sum for years at 5% per annum is Rs 40. Find the sum

19. A grocer bought sugar worth Rs 4500. He sold one-third of it at a gain of 10%. At what gain per cent must the remaining sugar be sold to have a gain of 12% on the whole?

20. How much per cent above the cost price should a shopkeeper mark his goods so that after allowing a discount of 25 % on the marked price, he gains 20% ?

21. Find the compound interest on Rs 5000 for one year at 8% per annum, compounded half yearly.

22. Find the smallest number of 3 digits which is a perfect square.

23. Find the smallest square number that is divisible by each of the numbers 8, 15 and 20.

24. Divide 150 into three parts, such that the second number is five-sixths the first and the third number is four-fifths the second

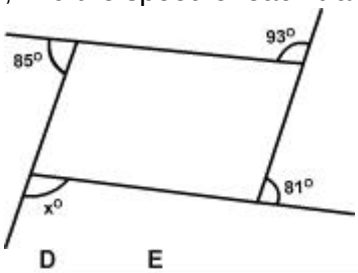
25. Two angles are complementary and one angle is 10° less than three times the other, find the angles

Section D (6 marks questions)

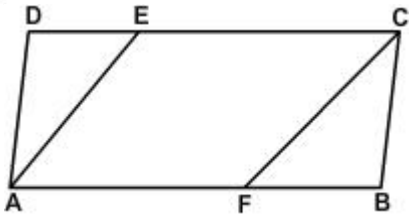
26. Half of a herd of deer are grazing in the field and three fourths of the remaining are playing nearby. The rest 9 are drinking water from the pond. Find the total number of deer in the herd.

27. The distance between two stations is 425 km. Two trains start simultaneously from these stations on parallel tracks to cross each other. The speed of one of them is greater than that of the other by 5 km/h. If the distance between the two trains after 3h of their start is 20 km, find the speed of each train. Check your solution

28. Prove that the sum of exterior angles of a quadrilateral is 360^o
Also, Find the measure of angle x for the following quadrilateral



29. In the given figure, ABCD is a parallelogram and line segments AE and CF bisect the angles A and C respectively. Show that AE ll CF



30. Prove that the diagonals of a square are equal and bisect each other at right angles OR,

The lengths of diagonals of a rhombus are 16 cm and 12 cm. Find the length of each side of the rhombus

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