V8M

Virudhunagar District

Common First Mid Term Test - 2024

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Standard 8

Time: 1.30 Hrs.   **MATHS**   Marks: 50

I. Choose the correct answer: 5×1=5

1) Which of the following pair is equivalent?

   a) $\dfrac{-20}{12}, \dfrac{5}{3}$
   b) $\dfrac{16}{-30}, \dfrac{-8}{15}$
   c) $\dfrac{-18}{36}, \dfrac{-20}{44}$
   d) $\dfrac{7}{-5}, \dfrac{-5}{7}$

2) $(-2)^{-3} \times (-2)^{-2} = $ _____.

   a) $\dfrac{-1}{32}$
   b) $\dfrac{1}{32}$
   c) 32
   d) -32

3) The radius of a circle of diameter 24 cm is _____.

   a) 12 cm
   b) 20 cm
   c) 14 cm
   d) 1 cm

4) The square of 43 ends with the digit _____.

   a) 9
   b) 6
   c) 4
   d) 3

5) $\dfrac{3}{4} \times \left(\dfrac{5}{8} \div \dfrac{1}{2} \right) = $ _____.

   a) $\dfrac{5}{8}$
   b) $\dfrac{2}{3}$
   c) $\dfrac{15}{32}$
   d) $\dfrac{15}{16}$

II. Fill in the blanks: 5×1=5

6) The next rational number in the sequence $\dfrac{-15}{24}, \dfrac{20}{-32}, \dfrac{-25}{40}$ is _____.

7) The longest chord of a circle is _____.

8) A cube has _____ faces.

9) The rational number _____ does not have a reciprocal.

10) The number of perfect square numbers between 300 and 500 is _____.

III. Say True or False: 5×1=5

11) 0 is the smallest rational number -

12) 79570 is not a perfect cube -
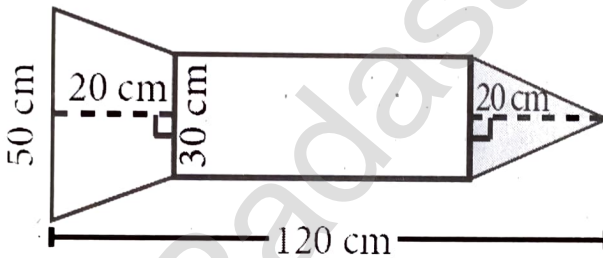
13) The square root of 225 is 15 -

14) Area of trapezium is $\dfrac{1}{2} \times (a + b)$ -

15) The additive inverse of $\dfrac{-11}{-17}$ is $\dfrac{11}{17}$ -

IV. Answer any 6 questions: 6×2=12

16) List any five rational numbers between $\dfrac{-1}{2}$ and $\dfrac{3}{5}$.

17) The sum of two rational numbers is $\frac{4}{5}$. If one number is $\frac{2}{15}$ then find the other.

18) Find x, so that $(-7)^{x+2} \times (-7)^5 = (-7)^{10}$.

19) A circle of radius 70 cm is divided into 5 equal sectors. Find the area of each of the sectors.

20) Verify Euler's formula for given Faces = 10, Vertices = 6, Edges = 12.

21) Verify the commutative property for multiplication for the rational numbers $\frac{-10}{11}$ and $\frac{-8}{33}$.

22) The area of a square field is 3136 m². Find its perimeter.

23) Expand using exponents: 6054.321

V. Answer ANY 3 questions: 3×5=15

24) Simplify: $\left(\frac{4}{3} - \left(\frac{-3}{2}\right)\right) + \left(\frac{-5}{3} \div \frac{30}{12}\right) + \left(\frac{-12}{9} \times \frac{-27}{16}\right)$

25) Find square root by long division method: 17956

26) A rocket drawing has the measures as given in the figure. Find its area.

27) Find the length of arc, area and perimeter (π = 3.14) radius of a sector is 21 cm and its central angle is 120°.

28) Arrange the following in ascending and descending order:
$\frac{-17}{10}, \frac{-7}{5}, 0, \frac{-2}{4}, \frac{-19}{20}$

VI. Answer the following: 1×8=8

29) Construct a quadrilateral DEAR with DE = 6 cm, EA = 5 cm, AR = 5.5 cm, RD = 5.2 cm and DA = 10 cm. Also find its area.

(OR)

30) Construct a trapezium AIMS with $\overline{AI} \parallel \overline{SM}$, AI = 6 cm, IM = 5 cm, AM = 9 cm and MS = 6.5 cm.