

Time: 2.30 hours.

Marks: 60

5 x 1 = 5

I. Choose the correct answer:

- Which of the following pairs is equivalent?
a) $-\frac{20}{12}, \frac{5}{3}$ b) $\frac{16}{30}, -\frac{8}{15}$ c) $-\frac{18}{36}, -\frac{20}{44}$ d) $\frac{7}{-5}, -\frac{5}{7}$
- The rational number (numbers) which has additive inverse is an
a) 7 b) $-\frac{5}{7}$ c) 0 d) all of these
- $a \times (b + c) = (a \times b) + (a \times c)$
a) commutative property b) closure c) associative d) distributive
- Circumference of a circle
a) πr^2 b) $\frac{\pi r^2}{4}$ sq. units c) $2\pi r$ d) $(\pi+2) r$
- Congruent of triangles
a) SSS b) SAS c) RHS d) ALL

5 x 1 = 5

II. Fill ups:

- A part of circumference of a circle is called as _____.
- The cross section of a solid cylinder is _____.
- $6 \times y \times \underline{\hspace{1cm}} = 12x^3y$
- $(p+2)^2 = \underline{\hspace{1cm}}$
- Out comes of dice (single time) _____.

5 x 1 = 5

III. True or False:

- Area of a sector πr^2
- Coin has head and tail
- $4x^2 - 3x + 9$ is a monomial.
- All rational numbers have reciprocal.
- Two similar triangles will always have matching angles.

5 x 1 = 5

IV. Match the following:

- | | | |
|-------------------|---|----------------|
| 16. \equiv | - | Infinitive |
| 17. π | - | Congruence |
| 18. ∞ | - | Rupees |
| 19. $\frac{r}{2}$ | - | Radius |
| 20. r | - | $\frac{22}{7}$ |

10 x 2 = 20

V. Answer any ten:

- Subtract $\frac{-8}{11}$ from $\frac{-17}{11}$
- Write 4 equal rational numbers for $\frac{-3}{5}$.
- Compare the rational numbers $\frac{2}{3}$ and $\frac{4}{5}$
- Find the length of the arc when central angle 45° , $r = 16$ cm
- Define Sector.

26. Find the area of the shaded portion.



27. Multiply $(4x^2 + 9)$ & $(3x - 2)$ (or) $12x^2 \times 13xy$
 28. Factorise: $y^2 - 10y + 25$ (or) $x^2 + 14x + 49$
 29. Area of rectangle is m^2n^3 , $l = 8mn^2$. Find breadth.

30. Find
- x
- &
- y



- 31.
- $x = ?$



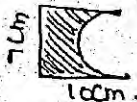
32. Outcomes of tossing 2 coins.

V. Answer any 2:

$$5 \times 3 = 15$$

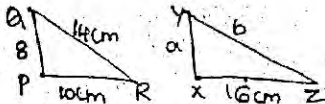
33. Verify commutative property for addition & multiplication: $\frac{-10}{11}$ & $\frac{-8}{33}$
 34. Write in ascending order: $\frac{-3}{5}$, $\frac{7}{-10}$, $\frac{-15}{20}$, $\frac{14}{-30}$, $\frac{-8}{15}$
 35. The radius of a sector is 21 cm & its central angle is 120° . Find length of arc.

36. Find the area of the shaded portion:



37. Multiply: $(3x^2y) \times (2x^3y^3 - 5x^2y + 9xy)$
 38. $(5P - 1)^2 = ?$ (or) Expand $(2a + 5)^3$

- 39.
- $\triangle PQR \sim \triangle XYZ$
- . Find
- a
- &
- b
- .



40. Out comes of tossing 3 coins.

VI. Answer any 1:

$$1 \times 5 = 5$$

41. ABCD; $AB = 5$ cm, $BC = 4.5$ cm, $CD = 3.8$ cm, $DA = 4.4$ cm, $AC = 6.2$ cm
 42. PQRS; $\angle P = \angle R = 3.5$ cm, $RS = 5.2$ cm, $SP = 5.3$ cm & $\angle Q = 120^\circ$
 43. Construct a quadrilateral NICE with $NI = 4.5$ cm, $IC = 4.3$ cm, $NE = 3.5$ cm, $NC = 5.5$ cm & $IE = 5$ cm. Also find its area.