

GENERAL INSTRUCTION:

SECTION –A: Answer all questions. Each questions carries one mark.

SECTION- B: Answer any seven questions. Each question carries two marks.

SECTION – C: Answer any nine questions. Each question carriers three marks.

SECTION – D: Answer any five questions. Each question carries four marks.

SECTION – E: Answer any one questions. Each carrier four marks.

SECTION – A

I. Multiple choice questions: 15x1=15

1. A triangle has _____ altitudes.
a) 1 b) 2 c) 3 d) 4
2. Vertically opposite angles are always _____.
a) Equal b) Not equal c) 90° d) None
3. Multiplicative identity is _____.
a) 1 b) (-1) c) 0 d) 5
4. The additive inverse of (-43) is _____.
a) (-43) b) 43 c) $\frac{1}{43}$ d) $-\frac{1}{43}$
5. Pythagoras property is applied in _____ triangle.
a) Scalene b) Isosceles c) Equilateral d) Right angled
6. Numerical coefficient of -4pqr is _____.
a) (-4) b) -4p c) -4q d) pqr
7. Which of the following is a rational number?
a) -5 b) $\frac{6}{9}$ c) 0 d) All of these
8. Among the given pairs, identify the complementary angles.
a) 80°, 10° b) 80°, 20° c) 70°, 30° d) 60°, 50°
9. The line segment joining a vertex of a triangle to the mid point of its opposite side is called _____.
a) Altitude b) Median c) Angle d) Midpoint

10. Solve: $\frac{y}{2} = 4$. a) 8 b) (-8) c) 4 d) 0

11. A line segment has _____ end points.
a) No b) One c) Two d) Many

12. Which of the following pair gives zero, when added.
a) 4, -6 b) -8, 11 c) -2, -6 d) 20, -20

13. If $60^\circ + y = 100^\circ$ then $y =$ _____.
a) 40° b) 30° c) 60° d) 50°

14. The line of the symmetry of scalene triangle is _____.
a) Many b) 1 c) 0 d) 3

15. One full turn = _____.
a) 360° b) 180° c) 90° d) 0°

SECTION - B

II. Answer any seven form the following: 7x2=14

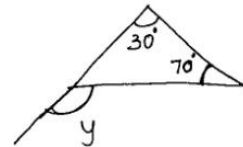
16. Draw the following shapes with line of symmetry: Rectangle, circle.

17. Verify $a - (-b) = a + b$ for the values $a = (-3)$ and $b = 7$.

18. Draw a number line and represent $\left(\frac{-3}{7}\right)$.

19. Check whether $m = 6$ is a solution for $m - 5 = 10$ or not.

20. Find the unknown angle y.

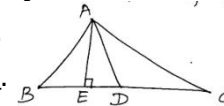


21. Simplify: $4ab - 3a + 6 + 5a$.

22 In $\triangle ABC$, Dis the midpoint of BC.

i) AD is _____.

ii) AE is _____.



23. Write three more rational numbers in the given pattern.

$\frac{-2}{5}, \frac{-4}{10}, \frac{-6}{15}, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}$.

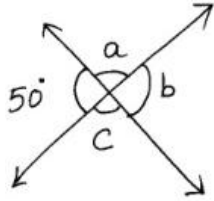
24. Solve: $2(y - 3) = 5$.

SECTION - C

III. Answer any nine from the following:

$9 \times 3 = 27$

25. Find the unknown angles and give reasons.



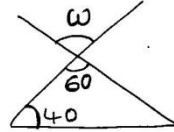
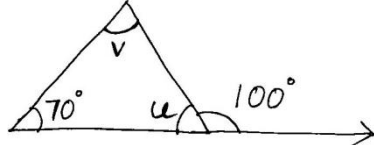
26. Check whether the given measurements will form a right triangle or not. 3cm, 4cm, 7cm.

27. Add: $a^2 - 7ab + b^2$ and $8ab - 7b^2 - 3a^2$.

28. Verify: $18 \times [7 + (-2)] = (18 \times 7) + (18 \times -2)$.

29. Find: a) $\frac{-1}{3} + \frac{7}{15}$ b) $\frac{-5}{13} \times \frac{4}{20}$

30. Find the angles u , v and w .



31. Solve by trial and error method: $3x - 2 = 7$.

32. Give the order of rotation and angle of rotation for square, rectangle and semicircle.

33. Identify the terms and factors of the given expression using tree diagram. $4x^2y - 2xyz + 5$.

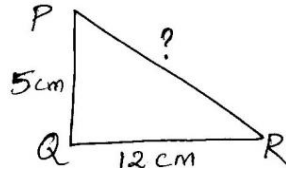
34. Solve: $5(y + 9) - 12 = 0$.

SECTION - D

IV. Answer any five from the following:

$5 \times 4 = 20$

35. PQR is a triangle right angled at Q. If $PQ = 5\text{cm}$ $QR = 12\text{cm}$ then find PR.

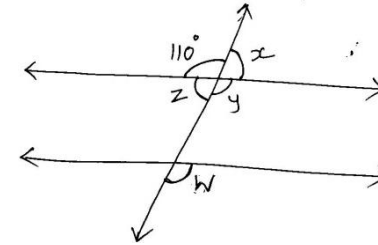


36. Find 5 rational numbers between (-3) and 0 .

37. Subtract $5a^2 - 3ab - 2b^2$ from $3a^2 + 4ab - 5b^2$.

38. In a class test containing 15 questions, 3 marks are awarded for every correct answer and (-2) marks are awarded for every incorrect answer and zero for unattempted. Ranjan got 7 correct answers and 7 incorrect answers. Find his total score? Is any questions unattempted? If so, how many?

39. Find the unknown angles. Give reason.



40. a) Give two examples for binomial.

b) Write 0 in the form of $\frac{p}{q}$.

c) Give a pair of integer whose sum gives (-10) .

d) Find the rational number P from the given number line.



SECTION - E

V. Answer any one from the following:

$1 \times 4 = 4$

41. Construct an equilateral triangle with side 6cm.

42. Construct ΔSTU where $ST = 6\text{cm}$ $TU = 5\text{cm}$ and $SU = 4\text{cm}$.