

08-T3-MATHS-TIRUPATTUR**ANNUAL EXAM - 2023****STD - VIII****MATHEMATICS****MARKS : 100****TIME : 2.30 Hrs****I. Choose the correct answer.****5 x 1 = 5**

- Which of the following is greatest? a) $\frac{-17}{24}$ b) $\frac{-13}{6}$ c) $\frac{7}{-8}$ d) $\frac{-31}{32}$
- The number of digits in the square root of 123454321 is a) 4 b) 5 c) 6 d) 7
- A cuboid has faces. a) 4 b) 5 c) 6 d) 7
- Missing terms of $-3m^3n \times 9$ (.....) = m^4n^3
a) $mn^2, 27$ b) $m^2n, 27$ c) $m^2n^2, -27$ d) $mn^2, -27$
- One factor of $x^3 + y^3$ is a) $(x - y)$ b) $(x + y)$ c) $(x + y)^3$ d) $(x - y)^3$

II. Fill in the blanks.**5 x 1 = 5**

- The value of x in $x + 5 = 12$ is
- Sum of a number and its half is 30, then the number is
- $(0, -5)$ lies on axis.
- The medians of a triangle cross each other at
- The process of converting the plain text to the Cipher text is called

III. Match the following.**5 x 1 = 5**

- | | | |
|------------------------|---|-------------------------------------|
| 11. $\frac{x}{2} - 10$ | - | $\frac{1}{2} \times d_1 \times d_2$ |
| 12. Origin | - | $x = 20$ |
| 13. Area of Rhombus | - | $a^2 + 2ab + b^2$ |
| 14. Additive identify | - | $(0, 0)$ |
| 15. $(a + b)^2$ | - | 0 |

IV. Say True or False**4 x 1 = 4**

- 79570 is not a perfect cube.
- The value of 2^{-2} is 4.
- The linear equation has one solution.
- 1, 2, 3 are pythagoreass triplets.

V. Answer any 10 of the following**10 x 2 = 20**

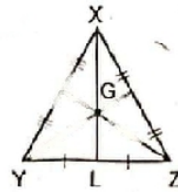
- $\frac{-6}{11} + \frac{8}{11} + \frac{-12}{11}$
- Is 10^6 a perfect square?
- Find the value of (i) 4^{-3} (ii) $\frac{1}{2^{-3}}$
- A spinner of radius 7.5 cm is divided into 6 equal sectors. Find the area of each of the sectors.
- $5x(2y - 3)$
- Expand $(x + 4)^3$
- Solve : $2x + 5 = 9$
- What is 25% of 30% of 400?

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28. Can a right triangle have sides that measure 5cm, 12cm, and 13cm?

29. using Repeated Subtraction method, find HCF of 42 and 70.

30. In the figure, G is centroid of Δxyz . If $GL = 2.5$ cm, find length of XL .



31. A and B together can do a piece of work in 16 days and A alone can do it in 48 days.
How long will B take to complete the work?

32. Write the following in Scientific notation 467800000000.

33. $\left(\frac{-5}{6}\right)^{-3}$

VI. Answer any 9 of the following.

34. $\left(\frac{4}{3} - \left(\frac{-3}{2}\right)\right) + \left(\frac{-5}{3} + \frac{30}{12}\right) + \left(\frac{-12}{9} \times \frac{-27}{16}\right)$

$$\frac{70}{42}$$

$$9 \times 5 = 45$$

35. $\sqrt[3]{\frac{1728}{129}}$

36. If central angle of the sector is 45° , radius is 16cm. Find length of arc.

37. $(2x + 5y)(3x - 4y)$

38. Factorise : $x^2 + 8x + 15$.

$$\frac{70 - 42}{28}$$

39. Find : $-3(4x + 9) = 21$

40. Find the quadrants without plotting the points on a graph.

(i) (3, -4) (ii) (5, 7) (iii) (2, 0) (iv) (4, -3) (v) (0, 10)

41. In Class VIII, a math club has 4 members M, A, T and H. Find the number of different ways, the club can elect i) a leader ii) a leader and an assistant leader.

42. A mat of length 180m is made by 15 women in 12 days. How long will it take for 32 women to make a mat of length 512m.

43. Draw a pie chart for the following data relating to the cost of construction of a house.

Particulars	Bricks	Steel	Cement	Timber	Labour	Others
Expenses	10%	15%	25%	10%	20%	20%

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

45. Divide $(5y^3 - 25y^2 + 8y) \div 5y$.

VII. Answer all the questions.

$$2 \times 8 = 16$$

46. (a) Construct a quadrilateral DEAR with $DE = 6$ cm, $EA = 5$ cm, $AR = 5.5$ cm, $RD = 5.2$ cm, $DA = 10$ cm. Find its area. (OR)

(b) Construct a rectangle BEAN, $BE = 5$ cm, $BN = 3$ cm. Also find its area.

47. (a) Draw a graph of $y = 5x$ (OR)

(b) Plot the following points in the graph sheet.

A (5, 2), B (-7, -3), C(-2, 4), D(-1, -1) E (0, -5), F (2, 0), G (7, -1), H(-4, 0)

(15, 3) (2, 10) (1, 0)