

TOPIC: CONSTRUCTION

- 1) Construct a $\triangle ABC$ in which $BC = 4.5$ cm, $\angle B = 45^\circ$ and $AB + AC = 5.6$ cm
- 2) Construct a rhombus whose side is of length 3.4cm and one of its angles is 45°
- 3) A triangle ABC can be constructed in which $\angle B = 60^\circ$, $\angle C = 45^\circ$ and $AB + BC + AC = 12$ cm. Is this Statement true? Justify your answer
- 4) Construct an equilateral triangle if its altitude is 4.5 cm
- 5) Construct a $\triangle ABC$, given that perimeter = 10.5 cm, $\angle A = 75^\circ$, $\angle B = 60^\circ$
- 6) Construct a triangle PQR in which $QR = 6$ CM, $\angle Q = 60^\circ$ and $PR - PQ = 2$ cm
- 7) Construct a triangle in which $\angle A = 45^\circ$, $\angle B = 120^\circ$ $AB + BC + AC = 10.4$ cm

TOPIC: LINEAR EQUATIONS IN TWO VARIABLES**CLASS: IX**

- 1) Find four solutions of the linear equation $5x - 4y = -8$
- 2) Find two solutions of the linear equation $2(x + 3) - 3(y + 1) = 0$
- 3) Draw the graph of the linear equation $2x + 3y = 12$. At what points the graph of the equation Cuts the x axis and the y axis
- 4) Draw the graphs of the equations $x + y = 6$ and $2x + 3y = 16$ on the same graph paper. Find the coordinates of the points where the two lines intersect
- 5) The auto rickshaw fare in a city is charged Rs 10 for the first km and Rs 4 per km for Subsequent distance covered. Write the linear equation to express the above statement Draw the graph of the linear equation
- 6) Check whether the graph of the linear equation $2x + 3y = 12$ passes through the point (1, 3)
- 7) If (2, 5) is a solution of the equation $2x + 3y = m$, find the value of m (m = 19)
- 8) Frame a linear equations in the form $ax + by + c = 0$ by using the given values of a, b and c
 - a) $a = -2$, $b = 3$, $c = 4$ b) $a = 5$, $b = 0$, $c = -1$
- 9) Find the value of k, if $x = 2$, $y = 1$ is a solution of the equation $2x + 3y = k$ (k = 7)
- 10) Give the geometric representation of (A) $3x + 9 = 0$ as an equation in (a) one variable (B) $2x + 1 = x - 4$ (b) Two variable
- 11) Solve the equation $2x + 1 = x - 3$ and represent the solution on the number line
- 12) Give the equation of two lines passing through (2, 14). How many more such lines are there and Why
- 13) Solve for x: a) $\frac{3x + 2}{7} + \frac{4(x + 1)}{5} = \frac{2(2x + 1)}{3}$ (x = 4)
 b) $8y + \frac{21}{4} = 3y + 7$ (y = 7/20)
- 14) If present ages of son and father are expressed by x and y respectively and after ten years father Will be twice as old as his son. Write the relation between x and y
- 15) Does point (1, 3) lie on the line $3y = 2x + 8$
- 16) If (2, 3) and (4, 0) lie on the graph of equation $ax + by = 1$. Find value of a and b. Plot the graph the equation obtained
- 17) Express the equation $y = 2x + 3$ in the standard form and find two solutions. Is (2, 3) it's Solution?
- 18) Express y in terms of x from the equation $3x + 2y = 8$ and check whether the points (4, -2) lies on the line.
- 19) write each of the following as an equation in two variables (in standard form):
 - (a) $X = -5$ (b) $y = 2$ (c) $2x = 3$ (d) $5y = 2$