CLASS: IX **SUB: MATHEMATICS**

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 = 2cm
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 = 16on 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) 3 x + 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) $\frac{(3x+2)}{7} + \frac{4(x+1)}{5} = \frac{2}{3}(2x+1)$ (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