Chapter 4

ASSIGNMENT

OBJECTIVE 4.1

1. Which of the following equation is not linear equation ?

(A) $2x + 3 = 7x - 2$ (B) $\frac{2}{3}x + 5 = 3x - 4$ (C) $x^2 + 3 = 5x - 3$ (D) $(x - 2)^2 = x^2 + 8$

2. Solution of equation $\sqrt{3}x - 2 = 2\sqrt{3} + 4$ is

(A) $2(\sqrt{3}-1)$ (B) $2(1-\sqrt{3})$ (C) $1+\sqrt{3}$ (D) $2(1+\sqrt{3})$

3. The value of x which satisfy $\frac{6x+5}{4x+7} = \frac{3x+5}{2x+6}$ is

(A) -1 (B) 1 (C) 2 (D) -2

4. Solution of $\frac{x-a}{b+c} + \frac{x-b}{c+a} + \frac{x-c}{a+b} = 3$ is

(A) a + b - c (B) a - b + c (C) -a + b + c (D) a + b + c

5. A man is thrice as old as his son. After 14 years, the man will be twice as old as his son, then present age of this son.

(A) 42 years (B) 14 years (C) 12 years (D) 36 years

6. One forth of one third of one half of a number is 12, then number is

(A) 284 (B) 286 (C) 288 (D) 290

7. A linear equation in two variables has maximum

(A) only one solution (B) two solution (C) infinite solution (D) None of these

8. Solution of the equation $x - 2y = 2$ is/are

(A) x = 4, y = 1 (B) x = 2, y = 0 (C) x = 6, y = 2 (D) All of these

9. The graph of line $5x + 3y = 4$ cuts Y-axis at the point

(A) $\left(0,\frac{4}{3}\right)$ (B) $\left(0,\frac{3}{4}\right)$ (C) $\left(\frac{4}{5},0\right)$ (D) $\left(\frac{5}{4},0\right)$

10. If x = 1, y = 1 is a solution of equation $9ax + 12ay = 63$ then, the value of a is

(A) -3 (B) 3 (C) 7 (D) 5

SUBJECTIVE - 4.2

Solve the following linear equations in one variable

1. If $\frac{2x+7}{x+2} = \frac{4x+3}{2x-7}$, find the value of $x^3 + x^2 + x + 1$.

2. Determine whether x = 5, y = 4 is a solution of the equation x - 2y = - 3

Solve the following linear equations in two variable.

3. 8x - 5y = 34, 3x - 2y = 13

4. 20x + 3y = 7, 8y - 15x = 5

5. 2x - 3y - 3 = 0, $\frac{2x}{3} + 4y + \frac{1}{2} = 0$

6. Draw the graph of 2x + 3y = 6 and use it to find the area of triangle formed by the line and co-ordinate axis.

7. Draw the graph of the lines 4x - y = 5 and 5y - 4x = 7 on the same graph paper and find the coordinates of their point of intersection.

8. Find two numbers such that five times the greater exceeds four times the lesser by 22 and three times the greater together with seven times the lesser is 32.

9. Draw the graph of x - y + 1 = 0 and 3x + 2y - 12 = 0 on the same graph. Calculate the area bounded by these lines & X-axis.

10. If p = 3x + 1, q = $\frac{1}{3}$(9x + 13) and p : q = 6 : 5 then find x.