

3. Find the value of :

$$\text{i)} 4pq \times 2r \quad (p=5, q=3, r=\frac{1}{2})$$
$$= 4 \times 5 \times 3 \times 2 \times \frac{1}{2} = 60$$

$$\text{ii)} \frac{yz}{z} \quad (x=8, y=4, z=16)$$
$$= \frac{4 \times 8}{16} = \frac{32}{16} = 2$$

$$\text{iii)} \frac{a+b-c}{2a} \quad (a=5, b=7, c=2)$$
$$= \frac{5+7-2}{2 \times 5} = \frac{12-2}{10} = \frac{10}{10} = 1$$

2. Simplify :

$$\begin{aligned} \text{i)} \quad 12x - (5x + 2x) \\ = 12x - 7x \\ = 5x \end{aligned}$$

$$\begin{aligned} \text{ii)} \quad 10m + (4n - 3n) - 5n \\ = 10m + n - 5n \\ = 10m - 4n \end{aligned}$$

$$\begin{aligned} \text{iii)} \quad (15b - 6b) - (8b + 4b) \\ = 9b - 12b \\ = -3b \end{aligned}$$

$$\begin{aligned} \text{iv)} \quad -(-4a - 8a) \\ = -(-12a) \\ = 12a \end{aligned}$$

$$\begin{aligned} \text{v)} \quad x - (x - y) - (-x + y) \\ = x - \cancel{x} + y + \cancel{x} - y \\ = x \end{aligned}$$

$$\begin{aligned} \text{vi)} \quad p + (-q - r - s) - (p - q - r) \\ = \cancel{p} - \cancel{q} - \cancel{r} - s - \cancel{p} + \cancel{q} + \cancel{r} \\ = -s \end{aligned}$$

$$\begin{aligned} \text{vii)} \quad (a + b) - (c + d) - (e - f) \\ = a + b - c - d - e + f \end{aligned}$$

$$\begin{aligned} \text{viii)} \quad 3x + (8x - 5x) - (7x - 4x) \\ = 3x + 3x - 6x \\ = 0 \end{aligned}$$

$$\begin{aligned} \text{ix)} \quad & a - (a - b - c) \\ & = a - a + b + c \\ & = b + c \end{aligned}$$

$$\begin{aligned} \text{x)} \quad & 6a^2 + (2a^2 - a^2) - (a^2 - b^2) \\ & = 6a^2 + a^2 - a^2 + b^2 \\ & = 6a^2 + b^2 \end{aligned}$$

$$\begin{aligned} \text{xi)} \quad & 2m - (3m + 2n - 6n) \\ & = 2m - 3m - 2n + 6n \\ & = -m + 4n \end{aligned}$$

$$\begin{aligned} \text{xii)} \quad & -m - n - (-m) - m \\ & = -m - n + m - m \\ & = -m - n \end{aligned}$$

$$\begin{aligned} \text{xiii)} \quad & x + y - (x + y - x) \\ & = x + y - (x - y + x) \\ & = x + y - x + y - x \\ & = 2y - x \\ & = x + y - (x + y - x) \\ & = x + y - (y) \\ & = x + y - y \\ & = x \end{aligned}$$

$$\begin{aligned} \text{xiv)} \quad & 25y - (5x - 10y + 6x - 3y) \\ & = 25y - 5x + 10y - 6x + 3y \\ & = 25y + 10y + 3y - 5x - 6x \\ & = 38y - 11x \end{aligned}$$

$$\begin{aligned} \text{xv)} \quad & 3x + (2x - x + 2) \\ & = 3x + (2x - x - 2) \\ & = 3x + 2x - x - 2 \\ & = 5x - x - 2 \\ & = 4x - 2 \end{aligned}$$

$$\begin{aligned} \text{xvi)} \quad & a - (2a - 4a + 3a) \\ & = a - (2a - 4a - 3a) \\ & = a - 2a + 4a + 3a \\ & = 6a \end{aligned}$$

$$\begin{aligned} \text{xvii)} \quad & 5x^2 - (3x - x^2 - 4) \\ & = 5x^2 - (3x + x^2 + 4) \\ & = 5x^2 - x^2 - 3x - 4 \\ & = 4x^2 - 3x - 4 \end{aligned}$$

$$\begin{aligned} \text{xviii)} \quad & -(y - x) - (x + y - 2x + y) \\ & = -(y - x) - (x + y - 2x - y) \\ & = -y + x - x - y + 2x + y \\ & = 2x - y \end{aligned}$$

EXERCISE - 20 (c)

1. Fill in the blanks: -

$$i) 2a + b - c = \underline{2a + (b - c)}$$

$$ii) 3x - z + y = \underline{3x - (z - y)}$$

$$iii) 6p - 5x + q = \underline{6p - (5x - q)}$$

$$iv) a + b - c + d = \underline{a + (b - c + d)}$$

$$v) 5a + 4b + 4x - 2c = \underline{4x - (2c - 5a - 4b)}$$

$$vi) 7x + 2z + 4y - 3 = \underline{-3 + 4y + (7x + 2z)}$$

$$vii) 3m - 2n + 6 = \underline{6 - (2n - 3m)}$$

$$viii) 2t + r - p - q + s = \underline{2t + r - (p + q - s)}$$