

$$\begin{aligned} 3. \text{ i) } 4pq \times 2r &= (4 \times 5 \times 3) \times (2 \times \frac{1}{2}) \\ &= 60 \times 1 = 60 \end{aligned}$$

$$\text{ii) } \frac{yx}{z} = \frac{4 \times 8}{16} = \frac{32}{16} = 2$$

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

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

$$\begin{aligned} \text{iv)} & -(-4a - 8a) \\ & = 0 + 4a + 8a \\ & = 12a \end{aligned}$$

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

$$\begin{aligned} \text{vi)} & P + (-q - r - s) - (p - q - r) \\ & = P + 0 - q - r - s - (P + r + x) \\ & = -s \end{aligned}$$

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

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

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

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



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

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

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

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

$$\begin{aligned}
 \text{x v)} \quad & 3x + (2x - \overline{x + 2}) \\
 & = 3x + 2x - \cancel{x} - \cancel{2} \\
 & = 4x - 2
 \end{aligned}$$

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

$$\begin{aligned}
 \text{x vii)} \quad & 5x^2 - (3x - \overline{x^2 - 4}) \\
 & = 5x^2 - \cancel{3x} + \cancel{x^2} - \cancel{4} \\
 & = \cancel{5x^2} \quad 6x^2 - 3x - 4
 \end{aligned}$$

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



$$i) 2a + b - c = 2a + (b - c)$$

$$ii) 3x - z + y = 3x - (z + y)$$

$$iii) 6p - 5x + q = 6p - (5x + q)$$

$$iv) a + b - c + d = a + (b - c + d)$$

$$v) 5a + 4b + 4x - 2c = 4x - (2c - 5a - 4b)$$

$$vi) 7x + 2z + 4y - 3 = -3 + 4y + (2z + 7x)$$

$$vii) 3m - 2n + 6 = 6 - (2n - 3m)$$

$$viii) 2b + x - p - q + s = 2b + x - (p + q - s)$$