

$$i) (23 - 15) + 4$$

$$= 8 + 4$$

$$= 12$$

$$ii) 5x + (3x + 7x)$$

$$= 5x + 10x$$

$$= 15x$$

$$iii) 6m - (4m - m)$$

$$= 6m - 3m$$

$$= 3m$$

$$iv) (9a - 3a) + 4a$$

$$= 6a + 4a$$

$$= 10a$$

$$v) 35b - (16b + 9b)$$

$$= 35b - 25b$$

$$= 10b$$

$$vi) (3y + 8y) - 5y$$

$$= 11y - 5y$$

$$= 6y$$

$$2i) 12x - (5x + 2x)$$

$$= 12x - 7x$$

$$= 5x$$

$$ii) 10m + (4n - 3n) - 5n$$

$$= 10m + n - 5n$$

$$= 10m - 4n$$

$$= 10m - 4n$$

$$iii) (15b - 6b) - (8b + 4b)$$

$$= 9b - 12b$$

$$= -3b$$

$$iv) -(4a - 8a)$$

$$= 4a + 8a$$

$$= 12a$$

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

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

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

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

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

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

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

$$\begin{aligned}
 \text{v) } & p - (q - r - s) \\
 &= p - q + r + s \\
 &= -q + r + s + p
 \end{aligned}$$

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

$$\begin{aligned}
 \text{vii) } & 6a^2 + (2a^2 - a^2) \\
 &= 6a^2 + 2a^2 - a^2 \\
 &= 7a^2
 \end{aligned}$$

$$\begin{aligned}
 \text{viii) } & -m - n - (-m) - n \\
 &= -m - n + m - n \\
 &= -m - n - n \\
 &= -m - 2n
 \end{aligned}$$

$$\begin{aligned}
 \text{ix) } & 25y - (5x - 10y + 6x) \\
 &= 25y - 5x + 10y - 6x \\
 &= 35y - 11x
 \end{aligned}$$

$$\begin{aligned}
 \text{x) } & a - (2a - 4a + 3a) \\
 &= a - (2a - 4a + 3a) \\
 &= a - 2a + 4a - 3a \\
 &= 0
 \end{aligned}$$

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

$$\begin{aligned}
 \text{3i)} \quad & x - (y - z) + x + (y - z) + y - (z + x) \\
 & = x - y + z + x + y - z + y - z - x \\
 & = x + y - z
 \end{aligned}$$

$$\begin{aligned}
 \text{ii)} \quad & x - [y + \{x - (y + x)\}] \\
 & = x - [y + \{x - y - x\}] \\
 & = x - [y + x - y - x] \\
 & = x - x + y + x \\
 & = x
 \end{aligned}$$

$$\text{vi)} \quad 3x - [5y - \{6y + 2(10y)}$$

$$\begin{aligned}
 \text{iii)} \quad & 4x + 3(2x - 5y) \\
 & = 4x + 6x - 15y \\
 & = 10x - 15y
 \end{aligned}$$

$$\begin{aligned}
 \text{iv)} \quad & 2(3a - b) - 5(a - 3b) \\
 & = 6a - 2b - 5a + 15b \\
 & = a + 13b
 \end{aligned}$$

$$\begin{aligned}
 \text{v)} \quad & p + 2(a - \overline{x + p}) \\
 & = p + 2(a - x - p) \\
 & = p + 2a - 2x - 2p \\
 & = -p + 2a - 2x
 \end{aligned}$$

$$\begin{aligned}
 \text{vi)} \quad & a - [-\{-(a - \overline{b - c})\}] \\
 & = a - [-\{-(a - b + c)\}] \\
 & = a - [-\{-a + b - c\}] \\
 & = a - [a - b + c] \\
 & = x - a + b - c \\
 & = b - c
 \end{aligned}$$

$$\begin{aligned}
 \text{vii)} \quad & 3x - [5y - 6y + 2(10y - x)] \\
 & = 3x - [5y - 6y + 20y - 2x] \\
 & = 3x - [5y - 6y - 20y + 2x] \\
 & = 3x - 5y + 6y + 20y - 2x \\
 & = x + 21y
 \end{aligned}$$

$$\begin{aligned}
 \text{viii)} \quad & 5a^2 - a(a - a - 2) \\
 & = 5a^2 - a(a - a + 2) \\
 & = 5a^2 - a^2 + a^2 + 2a \\
 & = 5a^2 - 5a^2 + 5a^2 - 10a \\
 & = 5a^2 - 10a
 \end{aligned}$$