

Evaluate;

$$(23 - 15) - 7 = 8 - 7 = 1$$

$$5x + (3x + 7x) = 5x + 10x = 15x$$

$$6m - (4m - m) = 6m - 3m = 3m$$

$$(9a - 3a) + 4a = 6a + 4a = 10a$$

$$35b - (16b + 9) = 35b - 25b = 10b$$

$$(3y + 8y) - 5y - 11y = 11y - 5y - 11y = -5y$$

Simplify

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

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

$$12x - 5x + 2x = 9x$$

$$= 10m + 4n - 3n - 5m = 5m + n$$

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

$$15b - 6b - 8b + 4b = 5b$$

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

$$-4a + 8a = 4a$$

$$x - (x - y) + (x + y)$$

$$x - x + y + x + y = x + 2y$$

$$(v_i) \quad p + (q - r - s) - (p - q - r)$$

$$\Rightarrow p - q - r - s - p + q + r$$

$$= p - p - q + q - r + r - s$$

$$= 0 + 0 + 0 - s$$

$$= -s$$

$$(v_{ii}) \quad (a + b) - (c + d) + (e - f)$$

$$a + b - c - d + e - f$$

$$a + b - c - d + e - f \text{ Ans.}$$

$$(v_{iii}) \quad 3x + (8x - 5x) - (2x - 7x)$$

$$3x + 8x - 5x - 2x + 7x$$

$$= 12 - 5 = 7 - 7 = 0$$

$$(v_{iv}) \quad a - (a - b - c)$$

$$= a - a + b + c$$

$$(x) \quad 6a^2 + (2a^2 - a^2) - (a^2 - b^2)$$

$$6a^2 + 2a^2 - a^2 - a^2 + b^2$$

$$(xi) 2m - (3m + 2n - 4n)$$

$$2m + 4n -$$

$$(xii) x + y - (x + y - n - n - (4n) - m)$$

$$-n - n - (4n) - m$$

$$-m - n$$

$$(xiii) x + y - (x + y - n)$$

$$x + y - x - y + n$$

$$(xiv) 5y (5x - 6y) + 6x (3y)$$

$$25y - 5x - 6y + 6x - 3y$$

$$22y + 11 + 6y$$

$$(xv) 3x + (2x - x + 2)$$

$$3x + 2x - x + 2$$

$$4x + 2$$

$$(xvi) a - (2a - 4a + 3a)$$

$$a - (2a - 4a + 3a)$$

$$a + 2a + 4a - 3a$$

= 0

$$(vi) 5x^2 - (3x - x^2 - 4)$$

$$= 5x^2 - 3x + x^2 + 4$$

$$= 7x^2 - 3x + 4$$

$$(vii) -(y-x) - (x+y-2x+y)$$

$$= -y + x - x - y + 2x - y$$

$$= -3y + 2x$$

3. Simplify

$$(i) x - (y-2) + (y-2) + y - (2+x)$$

$$= x - y + 2 + y - 2 + y - 2 - x$$

$$= y - 2$$

$$(ii) x - [y + \{x - (y+x)\}]$$

$$= x - [y + \{x - y - x\}]$$

$$= x - [y + x - y - x]$$

$$= x - y - x + y + x$$

rx

Ans.

$$(ii) 4x + 3(2x - 5y)$$

$$4x + 3 + 2x - 5y$$

$$6x + 3 - 5y \quad \text{Ans.}$$

$$(iii) 2a(3a - b) - 5(a - 3b)$$

$$= 2 \cdot 3a - 2 \cdot b - 5a + 15b$$

$$= 6a - 2b - 5a + 15b \quad \text{Ans.}$$

$$(iv) p + 2q$$

$$(v) 4x + 3(2x - 5y)$$

$$4x + 3 + 2x - 5y$$

$$6x + 3 - 5y \quad \text{Ans.}$$

$$(vi) 2(3a - b) - 5(a - 3b)$$

$$= 2 \cdot 3a - 2 \cdot b - 5a + 15b$$

$$= 6a - 2b - 5a + 15b$$

$$= a + 13b \quad \text{Ans.}$$

$$(vii) p + 2(q + r + p)$$

$$= p + 2q + 2r + 2p$$

$$= 3a + 2b - 2c$$

$$(iv) a - [-\{+ (a+b-c)\}]$$

$$a - [-\{+ a + b - c\}]$$

$$a - [-\{+ a + b - c\}]$$

$$a - -\{+ a + b - c\}$$

b-c Ans.

$$(v) 3x - \{5y - \{+ 2(\log y - x)\}\}$$

$$3x - \{5y - \{6y + 2 \log y - x\}\}$$

$$3x - \{5y - 6y + 2 \log y - x\}$$

$$3x - 5y - 6y + 2 \log y - x \text{ Ans.}$$

$$(vi) 5\{a^2 - a(a-a-2)\}$$

$$5\{a^2 - a(a-a-2)\}$$

$$5a^2 - a(a-a-2) \text{ Ans.}$$

$$(vii) 5\{a^2 - a(a-a+2)\}$$

$$5\{a^2 - a(a-a+2)\}$$

$$= 5\{a^2 - a^2 + a^2 - 2a -\}$$

$$= (50^2 - 20^2)$$

$$= 50^2 - 100$$