

Exercise - 20(a)

1. Evaluate :

Answers

i)  $(23 - 15) + 4 = 8 + 4 = 12$

ii)  $5x \times (3x + 7x) = 5x + 10x = 15x$

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

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

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

vi)  $(3y + 8y) - 5y = 11y - 5y = 6y$

2. Simplify :

Answers

i)  $12x - (5x + 2x) = 12x - 7x = 5x$

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

iii)  $(15b - 6b) - (8b + 4b) = 9b - 12b = -3b$

iv)  $-(-4a - 8a) = -(-12a) = 12a$

v)  $x - (x - y) - (-x + y) = x - x + x + y - y = x$

3. Simplify :

Answers

i)  $x - (y - z) + x + (y - z) + y - (z + x)$   
 $= x - y + z + x + y - z + y - z - x$   
 $= x + x - x - y + y + y + z - z - z = x + y - z$

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

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

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

$$\begin{aligned}
 \text{v)} \quad & p + 2(q - r + p) \\
 & = p + 2(q - r - p) \\
 & = p + 2q - 2r - 2p = 2q - 2r - p.
 \end{aligned}$$