

Exercise-20(A)

① Find the value of :

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

$= 4 \times 5 \times 3 \times 2 \times \frac{1}{2}$

$= \boxed{60}$ Ans

ii) $\frac{4x}{z}$ ($x = 8, y = 4, z = 16$)

$= \frac{4 \times 8}{16} = \boxed{2}$ Ans

iii) $\frac{a+b+c}{2a}$ ($a = 5, b = 7, c = 2$)

$= \frac{5+7+2}{2 \times 5} = \frac{10}{10} = \boxed{1}$ Ans

Exercise-20(B)

② Simplify :

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

$= 12x - 7x = \boxed{5x}$ Ans

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

$= 10m + n - 5n$

$= \boxed{10m - 4n}$ Ans

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

$= 9b - 12b = \boxed{-3b}$ Ans

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

$= -(-12a)$

$= \boxed{12a}$ Ans

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

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

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

$$\begin{aligned}
 \text{viii)} \quad & 3x + (8x - 5x) - (7x - x) \\
 & = 3x + 8x - 5x - 7x + x \\
 & = 3x + 8x + x - 5x - 7x \\
 & = 12x - \cancel{12x} = \boxed{0} \text{ Ans}
 \end{aligned}$$

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

$$\begin{aligned}
 \text{x)} \quad & 6a^2 + (2a^2 - a^2) - (a^2 - b^2) \\
 & = 6a^2 + 2a^2 - a^2 - a^2 + b^2 \\
 & = 6a^2 + 2a^2 \cancel{- a^2} - a^2 - a^2 + b^2 \\
 & = 8a^2 - 2a^2 + b^2 \\
 & = \boxed{6a^2 + b^2} \text{ Ans}
 \end{aligned}$$

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



$$\text{xii) } -m - n - (-m) - m$$

$$= -m - n + m - m$$

$$= \boxed{-n - m} \text{ Ans}$$

$$\text{xiii) } x + y - (x + y - x)$$

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

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

$$= \boxed{x} \text{ Ans}$$

$$\text{xiv) } 25y - (5x - 10y + 6x - 3y)$$

$$= 25y - 5x + 10y - 6x + 3y$$

$$= 25y + 10y + 3y - 5x - 6x$$

$$= \boxed{38y - 11x} \text{ Ans}$$

$$\text{xv) } 3x + (2x - x + 2)$$

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

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

$$= \cancel{3x} + 5x - x + 2$$

$$= \boxed{4x + 2} \text{ Ans}$$

$$\text{xvi) } a - (2a - 4a + 3a)$$

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

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

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

$$= \boxed{0} \text{ Ans}$$

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

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

Exercise 20(c)

① Fill in the blanks

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

ii) $3x - 2 + y = 3x - \underline{(2-y)}$

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

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

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

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

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

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

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