8/Oct/22

Maths (H.W.)

Ex 20 (A)

Q3 Find the value of :

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

$\Rightarrow 4(5)(3) \times 2(\frac{1}{2})$

$\Rightarrow 4 \times 5 \times 3 \times \cancel{2}^{1} \times \frac{1}{\cancel{2}}$

$\Rightarrow 60$

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

$\Rightarrow \frac{\cancel{4}^{1} \times \cancel{8}^{2}}{\cancel{8}_{2}} = \frac{4 \times 8}{16} = \frac{1}{2}$

$\Rightarrow \frac{4 \times 8}{16} = \frac{\cancel{32}^{2}}{\cancel{16}_{1}} = 2$

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

$\Rightarrow \frac{5 + 7 - 2}{2(5)} = \frac{5 + 7 - 2}{2 \times 5} = \frac{\cancel{10}^{1}}{\cancel{10}} = 1$

Ex 20 (B)

Q2 Simplify :

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

$\Rightarrow 12x - 5x - 2x$

$\Rightarrow 12x - 7x = 5x$

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

$\Rightarrow 10m + 4n - 3n - 5n$

$\Rightarrow$ ~~$10m + ($~~

$\Rightarrow 10m + (-4n) = 10m - 4n$

(iii) $(15b - 6b) - (3b + 4b)$

$\Rightarrow 15b - 6b - 3b - 4b = -1b$

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

$\Rightarrow 4a + 8a = 12a$

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

$\Rightarrow x - x + y + x - y = x$

(vi) $p + (-q - r - s) - (p - q - r)$

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

(vii) $(a + b) - (c + d) - (e - f)$

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

(viii) $3x + (8x - 5x) - (7x - x)$

$\Rightarrow 3x + 8x - 5x - 7x + x$

$\Rightarrow 0$

(ix) $a - (a - b - c)$

$\Rightarrow a - a + b + c = b + c$

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

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

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

$\Rightarrow 6a^2 + b^2$

(xi) $2m - (3m + 2n - 6n)$

$\Rightarrow 2m - 3m - 2n + 6n$

$\Rightarrow -1m + 4n$

(xii) $-m - n - (-m) - m$

$\Rightarrow -m - n + m - m = -m - n$

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

$\Rightarrow x + y - (x + y - x)$

$\Rightarrow x + y - x - y + x = x$

(xiv) $25y - (5x - 10y + 6x - 3y)$

$\Rightarrow$ ~~$25y - 5x + 10y - 6x + 3y$~~
$\Rightarrow$ $25y - 5x + 10y - 6x + 3y$
$\Rightarrow$ $25y + 10y + 3y - 5x - 6x$
$\Rightarrow$ $38y - 11x$

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

(xvi) $3x + (2x - \overline{x+2})$

$\Rightarrow$ $3x + (2x - x - 2)$
$\Rightarrow$ $3x + 2x - x - 2$
$\Rightarrow$ $4x - 2$

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

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

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

$\Rightarrow$ $5x^2 - 3x + x^2 + 4$
$\Rightarrow$ $6x^2 - 3x + 4$

(xviii) $-(y - x) - (x + y - \overline{2x+y})$

$\Rightarrow$ ~~$-y + x - x - y +$~~
$\Rightarrow$ $-(y - x) - (x + y - 2x - y)$
$\Rightarrow$ $-y + x - x - y + 2x + y = -y + 2x$

Ex 20(C)

1. FIB:

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

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

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

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) $2t + r - p - q + s = 2t + r - (p + q - s)$