(3) Find the value of:

i) 4pqx2r

Ans 4(5)x(3)x2(1/2)

$\Rightarrow 4\times5\times3\times2\times(1/2)$

$\Rightarrow 20\times3\times2\times1/2$

$\Rightarrow 60\times2\times1/2$

$= 120\times1/2$

$= \frac{120}{1}\times\frac{1}{2} = \frac{120}{2} = 60$

ii) $\frac{yz}{2}$

Ans $\frac{4(8)}{16} = \frac{4\times8}{16} = \frac{32}{16} = 2$

iii) $\frac{a+b-c}{2a}$

Ans $\frac{5+7-2}{2(5)} = \frac{10}{10} = 1$

(2) Simplify :→

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

$= 12x - 5x - 2x$

$= 7x - 2x$

$= 5x$

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

A) ~~$10m + 4n - 3n - 5n$~~

$\Rightarrow$ ~~$10m + 1n -$~~

$\Rightarrow 10m + (n) - 5n$

$\Rightarrow 10m + n - 5n$

$\Rightarrow 10m - 4n$

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

A) $9b - 12b$

$\Rightarrow -3b$

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

A) $\Rightarrow$ ~~$+4a - 8a$~~ $4a + 8a = 12a$

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

A) $x - x + y + x - y$

$\Rightarrow$ ~~$x - x + y - y$~~

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

$\Rightarrow x$

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

A) $p - q - r - s - p + q + r$

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

$\Rightarrow -s$

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

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

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

A) $3x + 8x - 5x - 7x + x$

$\Rightarrow 3x + 8x - 5x - 7x + x = 0$

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

Ans $a-a+b+c$

$\Rightarrow a-a+b+c$

$\Rightarrow b+c$

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

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

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

$\Rightarrow 8a^2+b^2$

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

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

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

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

Ans $2m-3m-2n+6n$

$\Rightarrow -m+4n$

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

$\Rightarrow -m+4n$

$\Rightarrow 4n-m$

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

Ans $-m-n+m-n$

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

$\Rightarrow -m-n$

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

Ans $x+y-x-y+x$

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

$\Rightarrow x$

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

Ans $x+y-x+y-x$

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

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

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

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

$\Rightarrow 38y - 11x$

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

Ans $3x + 2x - x \mp 2$

$\Rightarrow 3x + 2x - x \mp 2$

$\Rightarrow 4x \mp 2$

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

Ans ~~$a - 2a + 4a - 3a$~~

~~$\Rightarrow a - 2a + 4a - 3a$~~

~~$\Rightarrow 3a - 3a$~~

~~$\Rightarrow$~~

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

$\Rightarrow$ ~~$a - 2a + 4a - 3a$~~ $\Rightarrow a - 5a$

$\Rightarrow$ ~~$-a + a = 0$~~ $\Rightarrow a + 5a$

$\Rightarrow 6a$

xvii) $5x^2 - (3x - \overline{x^2 - 4})$

Ans $5x^2 - (3x - x^2 + 4)$

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

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

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

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

$\Rightarrow -y + x - x - y - 2x - y$

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

$\Rightarrow (-y - 2x)$

~~$\Rightarrow 2x$~~

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

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

$\Rightarrow -y+x-x-y+2x+y$

$\Rightarrow y-y+y-x-x+2x$

$\Rightarrow y+2x$

$\Rightarrow 2x-y$

Ex-20(c)

1) Fill in the blanks:

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

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

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

iv) $a + b - c + d$ ~~(a) (b)~~

$\Rightarrow a + (b - c + d)$

v) ~~$5a + 4b + 4x - 2c$~~

~~$\Rightarrow 4x - (-5a - 4b + 2c)$~~

A) $4x - (2c - 5a \overline{+} 4b)$

$\Rightarrow 4x - (2c - 5a - 4b)$

vi) $7x+2z+4y-3 = -3+4y+(7x+2z)$

~~vii) $3m-2n+6 = 6-(3m+2n)$~~

vii) $3m-2n+6 = 6-(3m+2n)$

$\Rightarrow 6-(2n-3m)$

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