

Ex-20(B)

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

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

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

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

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

viii) $3x+(8x-5x)-(7x-x)$
 $= 3x+3x-6x$
 $= 6x-6x=0$

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

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

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

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

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

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

xi) $2m-(3m+2n+6n)$
 $= 2m-3m-2n+6n$
 $= -m+4n=4n-m$

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

xii) $-m-n-(-m)-m$
 $= -m-n+m-m$
 $= -m-n$

iii) $(5b-6b)-(3b+4b)$
 $= 9b-12b=-3b$

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

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

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

$$\begin{aligned}
 \text{xi)} & 25y - (5x - 10y + 6x - 3y) \\
 &= 25y - 5x + 10y - 6x + 3y \\
 &= 25y + 10y + 3y - 5x - 6x \\
 &= 38y - 11x
 \end{aligned}$$

$$\begin{aligned}
 \text{x)} & 3x + (2x - x + 2) \\
 &= 3x + (2x - x - 2) \\
 &= 3x + (x - 2) \\
 &= 3x + x - 2 = 4x - 2
 \end{aligned}$$

$$\begin{aligned}
 \text{xvi)} & a - (2a - 4a + 3a) \\
 &= a - (2a - 4a - 3a) \\
 &= a - 2a + 4a + 3a \\
 &= 8a - 2a = 6a
 \end{aligned}$$

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

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

$$\begin{aligned}
 \text{3) i)} & x - (y - z) + x + (y - z) + y - (z + x) = x + 2y \\
 &= x - y + z + x + y - z + y - z - x \\
 &= x + x - x - y + y + y + z - z - z \\
 &= x + y - z
 \end{aligned}$$

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

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

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

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

$$\begin{aligned}
 \text{vi)} & a - [-(a - b - c)] \\
 &= a - [-(a - b + c)] \\
 &= a - [-a + b - c] = a + [a - b + c] \\
 &= a + a + b - c = b - c
 \end{aligned}$$

$$\begin{aligned}
 \text{vii)} & 3x - [5y - \{6y + 2(10y - x)\}] \\
 &= 3x - [5y - \{6y + 20y - 2x\}] \\
 &= 3x - [5y - 6y - 20y + 2x] \\
 &= 3x - 5y + 6y + 20y - 2x \\
 &= 3x - 2x + 6y + 20y - 5y
 \end{aligned}$$

$$\begin{aligned}
 \text{viii)} & 5\{a^2 - a(a - a - 2)\} \\
 &= 5\{a^2 - a(a - a + 2)\} \\
 &= 5\{a^2 - a^2 + a^2 - 2a\} \\
 &= 5a^2 - 5a^2 + 5a^2 - 10a \\
 &= 5a^2 - 10a
 \end{aligned}$$