H.W

Exercise 11(B)

1) i) $12x$

ii) $3x$

2) i) $-9x + 3x + 4x$

$= -2$

ii) $18pq - 15pq + 3pq$

$= 6pq$

3) i) $3m + 12m - 5m$

$= 10m$

ii) $7n^2 - 9n^2 + 3n^2$

$= n^2$

4) i) $a+b$ and $2a+3b$

$a + b + 2a + 3b$

$(a+2a) + (b+3b)$

$= 3a + 4b$

ii) $2x+y$ and $3x-4y$

$= 2x + y + 3x - 4y$

$= (2x+3x) + (y-4y)$

$= 5x - 3y$

5) i) $3x+8y+7z$, $6y+4z-2x$ and $3y-4x+6z$

$= 3x + 8y + 7z + 6y + 4z - 2x + 3y - 4x + 6z$

$= (3x - 2x - 4x) + (8y + 6y + 3y) + (7z + 4z + 6z)$

$= -3x + 17y + 17z$

ii) $3a+5b+2c+2a+3b-c+a+b+c$
$=(3a+2a+a)+(5b+3b+b)+(2c-c+c)$
$=6a+9b+2c$

6) i) x and 3y
$=x+3y$

ii) $-2a$ and $+5$
$=-2a+5$

7) The sides of triangle $= 2x+3y+x+5y+7x-2y$

Its perimeter
$=2x+3y+x+5y+7x-2y$
$=(2x+x+7x)+(3y+5y-2y)$
$=10x+6y$

∴ So, the perimeter of the triangle is $10x+6y$.

8) Perimeter of rectangle $= 2 \times$ (sum of adjacent sides)
$=2\times((6a+9b)+(8a-4b))$
$=2\times(14a+5b)$
$=28a+10b$

∴ So, the perimeter of rectangle is $28a+10b$

9) i) $2a+b, a+b$
$=2a+b-(a+b)$
$=2a-a+b-b$
$=a$

(iv) $p+2, 1$

$= (2-1)+p$

$= 1p$

(v) $8-x-(4x)$

$= 8-5x$

(vi) $-8c-(c+3d)$

$= -c+3d-(-8c)$

$= 9c+3d$