Exercise 6A

Q2

Answer :

(i) 7xy- (-8xy)
= 7xy+ 8xy
= 15xy

(ii) $-3x^2 - x^2$
$= -4x^2$

(iii) (4y - 5x) - (x- y)
= 4y - 5x - x + y
= 5y - 6x

(iv) $(a^2 + b^2 + 2ab) - (a^2 + b^2 - 2ab)$
$= a^2 - a^2 + b^2 - b^2 + 2ab + 2ab$ (Collecting like terms and adding them)

$= 4ab$

(v) $(2x^2 - 3y^2 + 6xy) - (x^2 - y^2)$
$2x^2 - x^2 - 3y^2 + y^2 + 6xy$ (Collecting like terms and adding them)
$= x^2 - 2y^2 + 6xy$

(vi) (2z -x -3y) - (x - y +3z)
= 2z -3z -x -x -3y +y (Collecting like terms and adding them)
= -z -2x - 2y

Q4

Answer :

$(8m - 7n + 6p^2) + (-3m - 4n - p^2)$

$= 8\mathbf{m} - 3\mathbf{m} - 7\mathbf{n} - 4\mathbf{n} + 6\mathbf{p}^2 - \mathbf{p}^2$

$= 5\mathbf{m} - 11\mathbf{n} + 5\mathbf{p}^2$

$(2m + 4n - 3p^2) + (- m - n - p^2)$.

$= 2\mathbf{m} - \mathbf{m} + 4\mathbf{n} - \mathbf{n} - 3\mathbf{p}^2 - \mathbf{p}^2$

$= \mathbf{m} + 3\mathbf{n} - 4\mathbf{p}^2$

$\mathbf{Now,}\ (\mathbf{m} + 3\mathbf{n} - 4\mathbf{p}^2) - (5\mathbf{m} - 11\mathbf{n} + 5\mathbf{p}^2)$

$= -4\mathbf{m} + 14\mathbf{n} - 9\mathbf{p}^2$

Q5

Answer :

$(8a - 6a^2 + 9) + (-10a - 8 + 8a^2)$

Collecting like terms and adding them:

$8\mathbf{a} - 10\mathbf{a} - 6\mathbf{a}^2 + 8\mathbf{a}^2 + 9 - 8$

$= -2\mathbf{a} + 2\mathbf{a}^2 + 1$

$\mathbf{Now,}\ -3 - (-2\mathbf{a} + 2\mathbf{a}^2 + 1)$

$= 2\mathbf{a} - 2\mathbf{a}^2 - 4$

Q6

Answer :

Collecting like terms and adding them:

(i) 5x + 7x - 9y -y

= 12x -10y

(ii)

$$x^2 - \frac{3}{2}x^2 - x - \frac{1}{2}x + \frac{3}{2}$$

$$= -\frac{1}{2}x^2 - \frac{3}{2}x + \frac{3}{2}$$

(iii) 7 + 7 - 2x -x - 5x + 5y + y - 3y

= 14 - 8x -3y

(iv)

$$\frac{1}{3}y^2 + \frac{2}{3}y^2 - 2y^2 - \frac{4}{7}y - \frac{2}{7}y - \frac{1}{7}y + 5 - 2 + 3$$

$$= -y^2 - y + 6$$

********** END **********