Q1

Solve the simultaneous equations

$$6x + 2y = -3$$
$$4x - 3y = 11$$

$x =$ ...., $y =$ ....

(Total 4 marks)

Q2

Solve the simultaneous equations

$$4x + y = -1$$

$$4x - 3y = 7$$

$x =$ .... $y =$ ....

(Total 3 marks)

Algebra - Simultaneous Linear Equations

Solve the simultaneous equations

$$6x + 2y = -3 \quad ①$$
$$4x - 3y = 11 \quad ②$$

$①×3$ $18x + 6y = -9 \quad ③$

$②×2$ $8x - 6y = 22 \quad ④$

$③+④$ $26x = 13$

$$x = \frac{13}{26}$$

$$x = \frac{1}{2}$$

$$6x + 2y = -3$$
$$4x - 3y = 11$$

Substitute for x in $①$

$$6\left(\tfrac{1}{2}\right) + 2y = -3$$
$$3 + 2y = -3$$
$$2y = -3 - 3$$
$$2y = -6$$
$$y = -\frac{6}{2} \qquad y = -3$$

$x = $ ...., $y = $ ....

$$x = \tfrac{1}{2} \ , \ y = -3$$

(Total 4 marks)

Solve the simultaneous equations

$$4x + y = -1 \quad ①$$
$$4x - 3y = 7 \quad ②$$

$$4x + y = -1$$

$①-②$ $4y = -8$

$$y = -\frac{8}{4}$$

$$4x - 3y = 7$$

$$y = -2$$

Subst for y in $①$

$$4x - 2 = -1$$
$$4x = -1 + 2$$
$$4x = 1$$
$$x = \tfrac{1}{4}$$

$x = $ ....$\dfrac{1}{4}$.......... $y = $ ....-2..........

(Total 3 marks)