

- 1 Solve algebraically the simultaneous equations

$$\begin{aligned}x^2 + y^2 &= 25 \\y - 2x &= 5\end{aligned}$$

(Total for Question is 5 marks)

2 Solve algebraically the simultaneous equations

$$x^2 + y^2 = 25$$

$$y - 3x = 13$$

.....
(Total for Question is 5 marks)

3 Solve the simultaneous equations

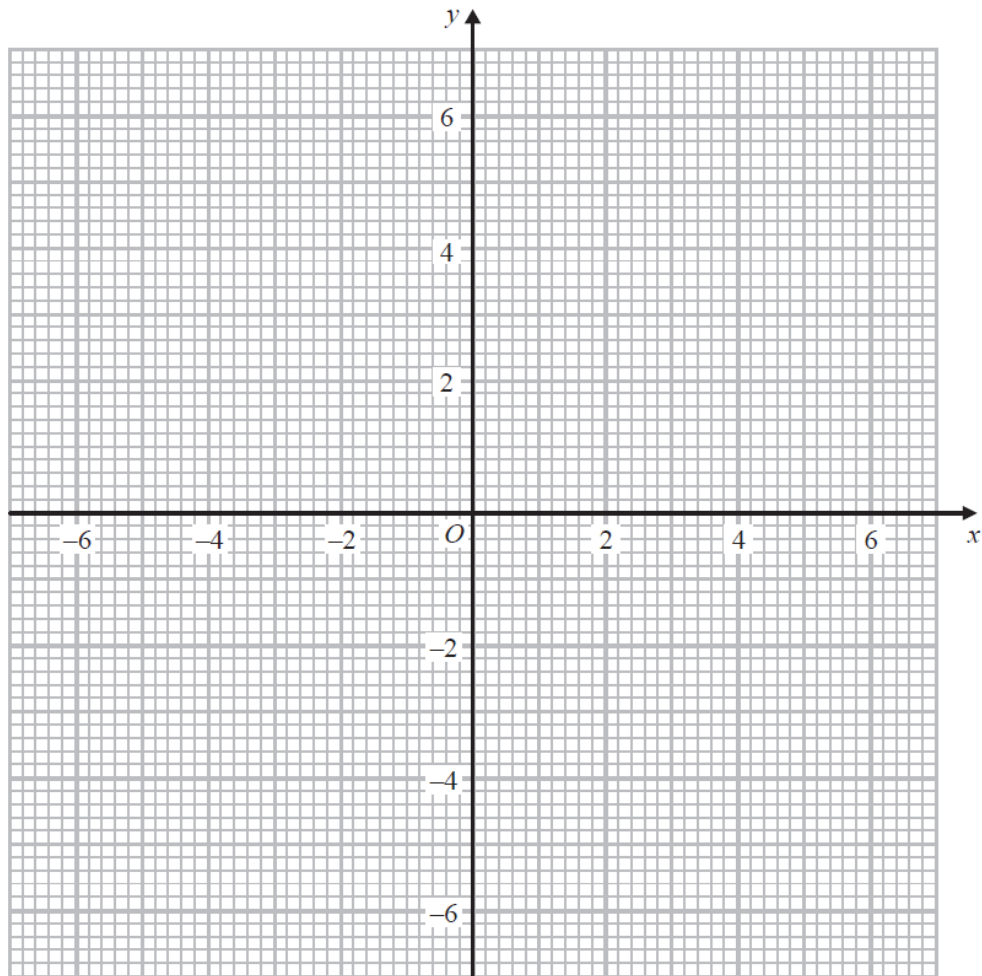
$$\begin{aligned}3x + y &= -4 \\3x - 4y &= 6\end{aligned}$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(Total for Question is 3 marks)

- 4 (a) On the grid, draw the graph of $x^2 + y^2 = 12.25$



(2)

- (b) Hence find estimates for the solutions of the simultaneous equations

$$\begin{aligned}x^2 + y^2 &= 12.25 \\ 2x + y &= 1\end{aligned}$$

(3)

(Total for Question is 5 marks)

5 Solve the simultaneous equations

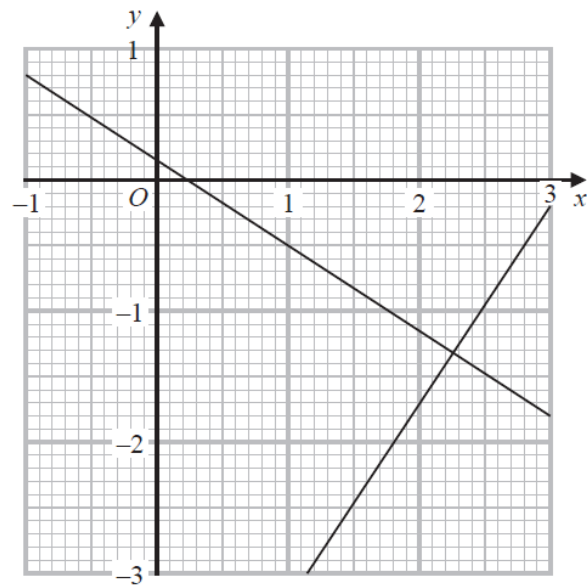
$$\begin{aligned}5x + y &= 21 \\ x - 3y &= 9\end{aligned}$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for Question is 3 marks)

- 6 The graphs with equations $3y + 2x = \frac{1}{2}$ and $2y - 3x = -\frac{113}{12}$ have been drawn on the grid below.



Using the graphs, find estimates of the solutions of the simultaneous equations

$$3y + 2x = \frac{1}{2}$$

$$2y - 3x = -\frac{113}{12}$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(Total for Question is 2 marks)

7 Solve algebraically the simultaneous equations

$$x^2 - 4y^2 = 9$$

$$3x + 4y = 7$$

(Total for Question is 5 marks)