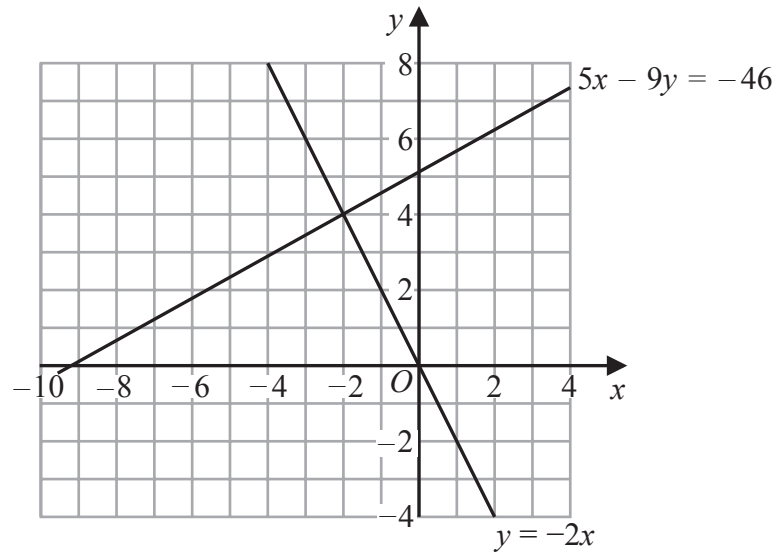


1



(a) Use these graphs to solve the simultaneous equations

$$\begin{aligned}5x - 9y &= -46 \\ y &= -2x\end{aligned}$$

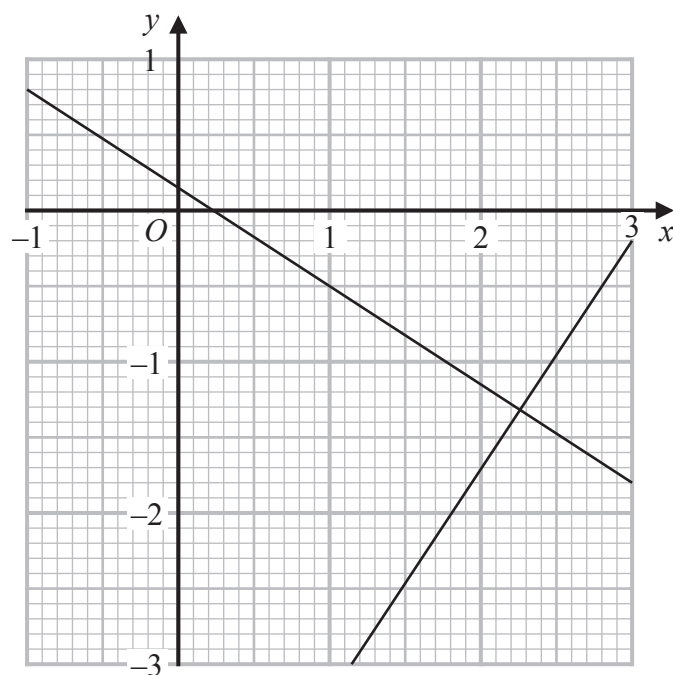
$x =$  .....

$y =$  .....

---

(Total for Question 1 is 1 mark)

- 2 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

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

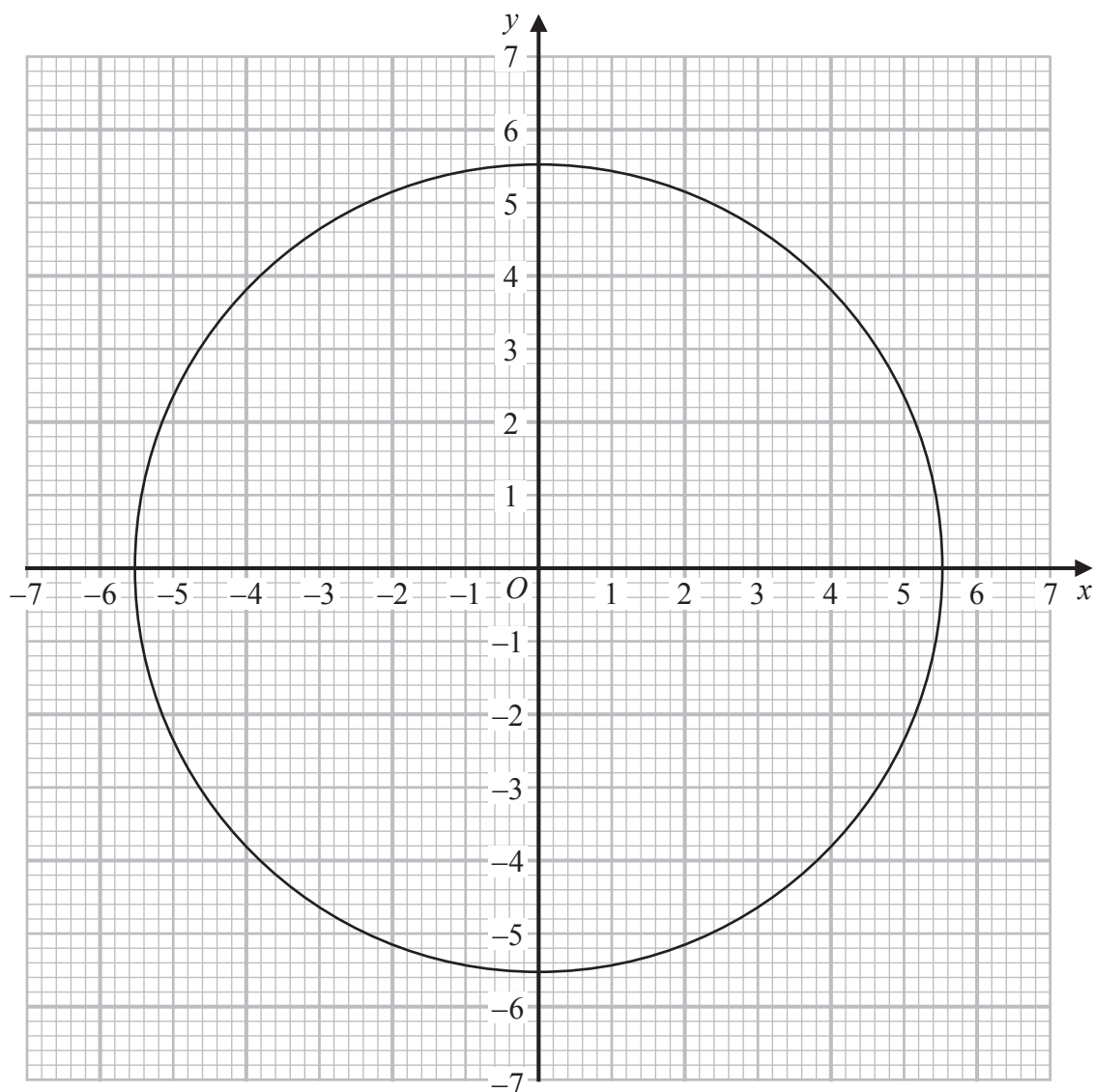
$$2y - 3x = -\frac{113}{12}$$

$x =$  .....

$y =$  .....

(Total for Question 2 is 2 marks)

3 The diagram shows the graph of  $x^2 + y^2 = 30.25$



Use the graph to find estimates for the solutions of the simultaneous equations

$$x^2 + y^2 = 30.25$$

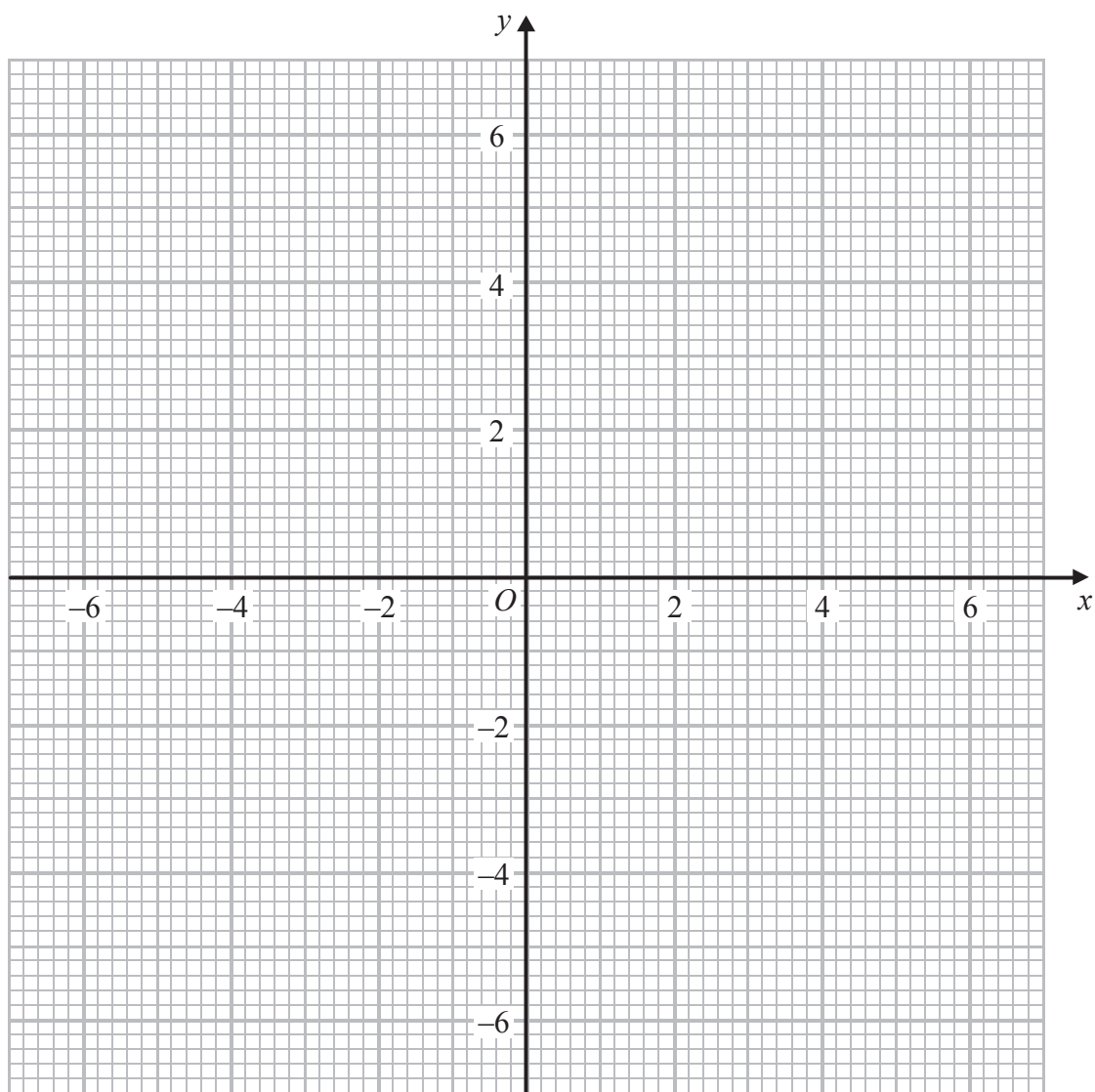
$$y - 2x = 1$$

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(Total for Question 3 is 3 marks)

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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

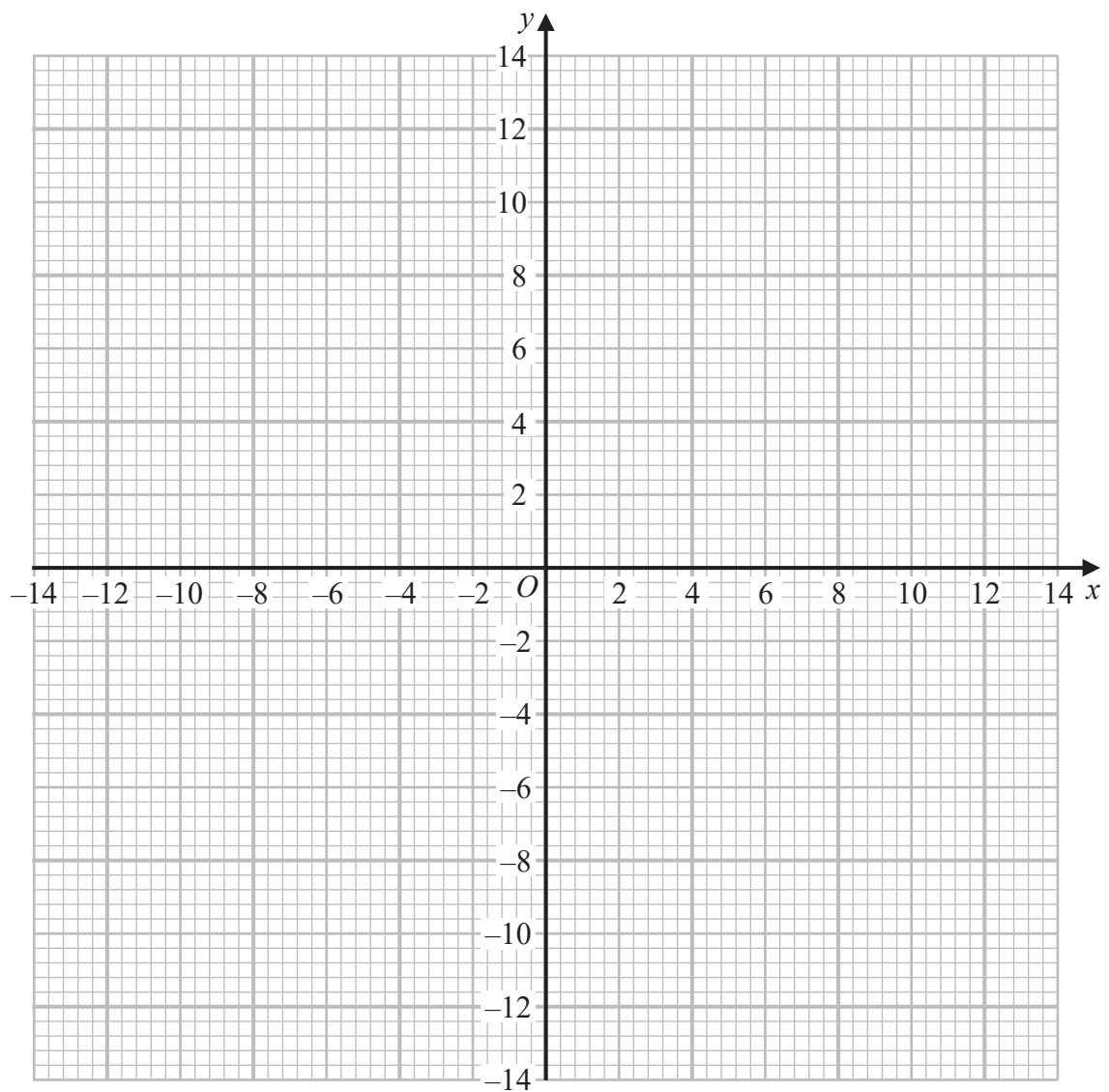
$$x^2 + y^2 = 12.25$$

$$2x + y = 1$$

(3)

(Total for Question 4 is 5 marks)

5 (a) On the grid, draw the graph of  $x^2 + y^2 = 169$



(2)

(b) Use your graph to find estimates for the solutions of the simultaneous equations

$$x^2 + y^2 = 169$$

$$2y = 3x$$

(3)

(Total for Question 5 is 5 marks)