

Exam Questions

Simultaneous Equations

Simultaneous Equations

Easy (5 questions)	/10
Medium (6 questions)	/16
Hard (6 questions)	/18
Total Marks	/44

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Easy Questions

- 1 Solve the simultaneous equations.
You must show all your working.

$$2x + 5y = 34$$

$$2x - 3y = 2$$

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

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

(2 marks)

- 2 Solve the simultaneous equations.
You must show all your working.

$$6x + 2y = 4$$

$$-6x + 3y = 21$$

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

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

(2 marks)

- 3 Solve the simultaneous equations.
You must show all your working.

$$9x - 5y = 28$$

$$4x - 5y = 18$$

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

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

(2 marks)

- 4** Solve the simultaneous equations.
You must show all your working.

$$6x - 3y = 12$$

$$2x + 3y = 16$$

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

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

(2 marks)

- 5** Use substitution to solve the simultaneous equations.
You must show all your working.

$$3x + 8y = 28$$

$$x = 2y$$

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

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

(2 marks)

Medium Questions

- 1 Solve the simultaneous equations.
You must show all your working.

$$\begin{aligned}x + 3y &= 19 \\ -2x + 4y &= 32\end{aligned}$$

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

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

(3 marks)

- 2 Use substitution to solve the simultaneous equations.
You must show all your working.

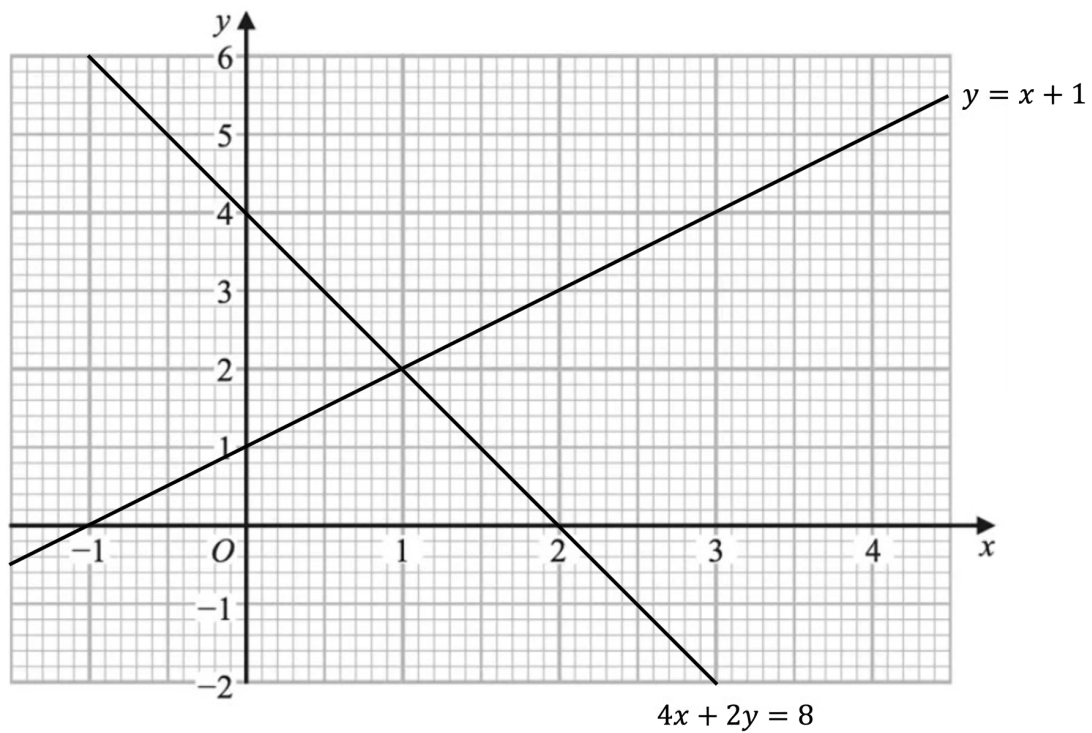
$$\begin{aligned}2x - 5y &= 32 \\ y &= 14 - 3x\end{aligned}$$

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

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

(3 marks)

3



Use the graphs to solve the simultaneous equations

$$4x + 2y = 8$$

$$y = x + 1$$

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

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

(1 mark)

4 Solve the simultaneous equations.

You must show all your working.

$$3x - 8y = 22$$

$$x + 4y = 4$$

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

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

(3 marks)

- 5 Solve the simultaneous equations.
You must show all your working.

$$3x - y = 22$$

$$x + 2y = 5$$

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

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

(3 marks)

- 6 Solve the simultaneous equations.
You must show all your working.

$$5x - 2y = 26$$

$$7x + 6y = 10$$

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

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

(3 marks)

Hard Questions

- 1 Solve the simultaneous equations.
You must show all your working.

$$5x - 9y = 44$$

$$11x + 3y = 17$$

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

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

(3 marks)

- 2 Use substitution to solve the simultaneous equations.
You must show all your working.

$$4x - 7y = 15$$

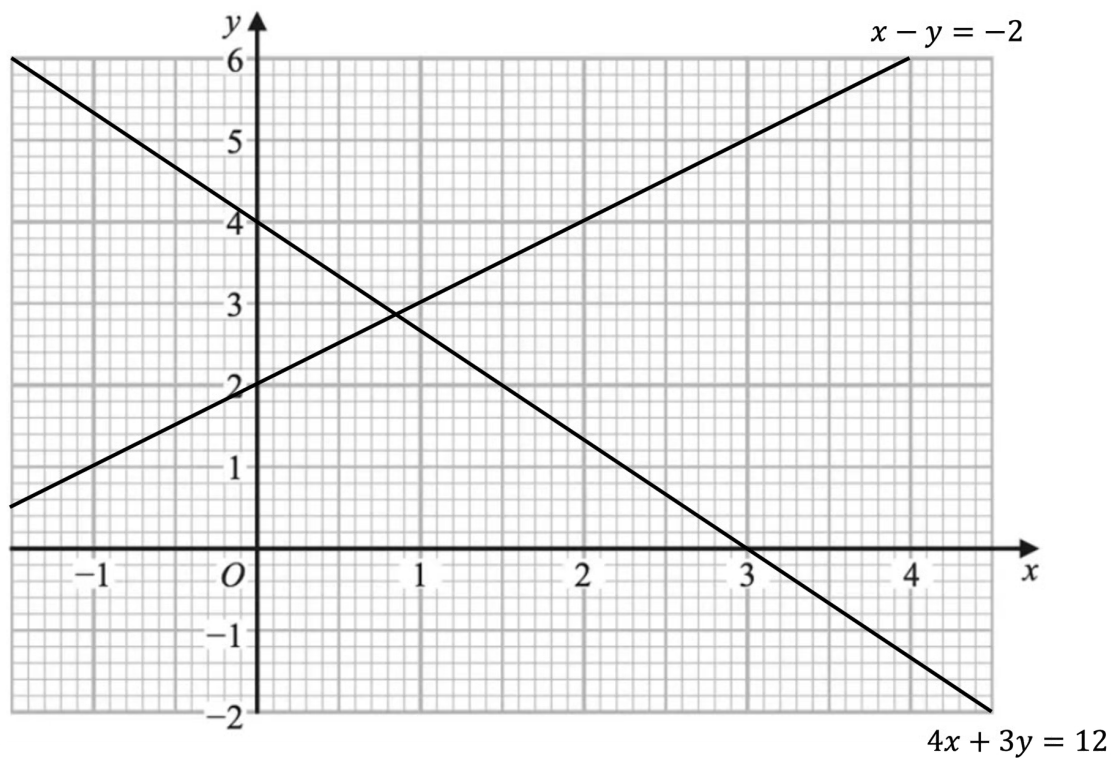
$$2x = 3y + 6$$

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

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

(3 marks)

3



Use the graphs to solve the simultaneous equations

$$\begin{aligned} 4x + 3y &= 12 \\ x - y &= -2 \end{aligned}$$

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

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

(1 mark)

4 Solve the simultaneous equations.

You must show all your working.

$$5x + 4y = 10$$

$$7x - 6y = 43$$

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

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

(4 marks)

- 5 Solve the simultaneous equations.
You must show all your working.

$$5x - 2y = 44$$

$$2x + 3y = 10$$

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

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

(4 marks)

- 6 The equations of two straight lines are $y = 3x + 13$ and $y = 7x - 3$.

Use algebra to solve these two simultaneous equations to find the co-ordinates of the point where the lines meet.
You must show all your working.

(3 marks)