Simultaneous Linear Equations

Question Paper

Level	GCSE
Subject	Mathematics
Exam Board	Edexcel IGCSE
Tier	Higher Tier
Topic	Equations, Formulae and Identities
Sub-Topic	Simultaneous Linear Equations
Booklet	Question Paper

Time Allowed: **44 minutes**

Score: **/37**

Percentage: **/100**

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	70%	60%	55%	50%	<50%

1. Showing clear algebraic working, solve the simultaneous equations

$$3a + 2b = 1$$
$$a + 2b = 5$$

$a =$ .....

$b =$ .....

(Total for Question 1 is 3 marks)

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2. Solve the simultaneous equations

$$y - 2x = 6$$
$$y + 2x = 0$$

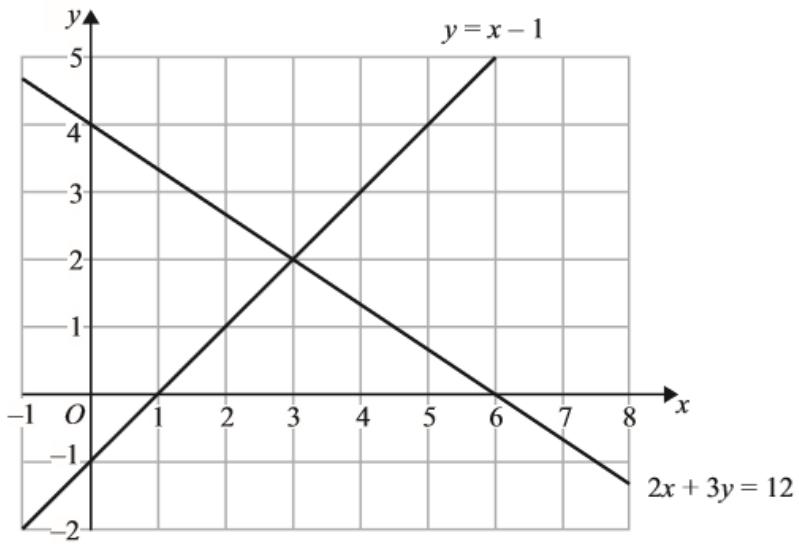
Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 2 is 3 marks)

3.



The diagram shows two straight lines.
The equations of the lines are $y = x - 1$ and $2x + 3y = 12$

(a) Write down the solution of the simultaneous equations

$$y = x - 1$$
$$2x + 3y = 12$$

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

(1)

(b) Find an equation of the line which is parallel to the line with equation $2x + 3y = 12$ and passes through the point (0, 10)

.....

(4)

(c) On the grid, mark with a cross (×) each point which satisfies both these inequalities $y > x - 1$ and $2x + 3y < 12$ and whose coordinates are **positive integers**.

(2)

(Total for Question 3 is 7 marks)

4. (a) Solve the simultaneous equations

$$5x + 3y = 9$$
$$7x - 2y = 25$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(4)

(b) P is the point of intersection of the lines with equations $5x + 3y = 9$ and $7x - 2y = 25$

Write down the coordinates of P.

(..... , ...)

(1)

(Total for Question 4 is 5 marks)

5. (a) Solve the simultaneous equations $3x + 5y = 14$
$4x + 3y = 4$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(4)

(b) Write down the coordinates of the point of intersection of the two lines whose equations are $3x + 5y = 14$ and $4x + 3y = 4$

(..... , ...)

(1)

(Total for Question 5 is 5 marks)

6. Solve the simultaneous equations

$$3x + 4y = 6$$

$$5x + 6y = 11$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 6 is 4 marks)

7. Solve the simultaneous equations

$$3x + 2y = 7$$

$$4x - 3y = 15$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 7 is 4 marks)

8. Solve the simultaneous equations

$$5y - 4x = 8$$
$$y + x = 7$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 8 is 3 marks)

9. Solve $x + 2y = 3$

$x - y = 6$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 9 is 3 marks)