

**1** Solve the simultaneous equations

$$\begin{aligned}3xy - y^2 &= 8 \\ x - 2y &= 1\end{aligned}$$

Show clear algebraic working.

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**(Total for Question 1 is 5 marks)**

**2** Solve the simultaneous equations

$$\begin{aligned}x - 6y &= 5 \\ xy - 2y^2 &= 6\end{aligned}$$

Show clear algebraic working.

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(Total for Question 2 is 5 marks)

**3** Solve the simultaneous equations

$$2x^2 + 3y^2 = 14$$

$$x = 2y - 3$$

Show clear algebraic working.

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(Total for Question 3 is 5 marks)

4 Solve the simultaneous equations

$$\begin{aligned}y &= 3 - 2x \\ x^2 + y^2 &= 18\end{aligned}$$

Show clear algebraic working.

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**(Total for Question 4 is 5 marks)**

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**5** Solve the simultaneous equations

$$\begin{aligned}3x^2 + y^2 - xy &= 5 \\ y &= 2x - 3\end{aligned}$$

Show clear algebraic working.

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(Total for Question 5 is 5 marks)

**6** Solve the simultaneous equations

$$x^2 - 9y - x = 2y^2 - 12$$

$$x + 2y - 1 = 0$$

Show clear algebraic working.

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**(Total for Question 6 is 5 marks)**

7 Solve the simultaneous equations

$$\begin{aligned}x - 2y &= 3 \\ x^2 - y^2 + 2x &= 10\end{aligned}$$

Show clear algebraic working.

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(Total for Question 7 is 5 marks)

**8** Solve the simultaneous equations

$$2x^2 + 3y^2 = 5$$

$$y = 2x + 1$$

Show clear algebraic working.

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**(Total for Question 8 is 5 marks)**



- 9 The line with equation  $2y = x + 1$  intersects the curve with equation  $3y^2 + 7y + 16 = x^2 - x$  at the points  $A$  and  $B$

Find the coordinates of  $A$  and the coordinates of  $B$

Show clear algebraic working.

(....., ..... ) and (....., ..... )

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(Total for Question 9 is 5 marks)

- 10** The line with equation  $y = x + 2$  intersects the curve with equation  $x^2 + y^2 - 2y = 24$  at the points  $A$  and  $B$ .

Find the coordinates of  $A$  and  $B$ .

Show clear algebraic working.

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**(Total for Question 10 is 5 marks)**