

## Simultaneous Equations

Exam Style Questions

1. Solve the following simultaneous equations

$$7x + 2y = 46$$

$$x + 2y = 10$$

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

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

(3 marks)

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2. Solve the following simultaneous equations

$$6x + y = 20$$

$$x + y = 5$$

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

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

(3 marks)

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3. Solve the following simultaneous equations

$$x + 8y = 36$$

$$x + y = 1$$

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

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

(3 marks)

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4. Solve the following simultaneous equations

$$7x - 4y = 22$$

$$3x + 4y = 8$$

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

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

(3 marks)

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5. Solve the following simultaneous equations

$$3x + 2y = 12$$

$$x - 2y = 4$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(3 marks)

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6. Solve the following simultaneous equations

$$12x - 5y = 20$$

$$8x - 5y = 16$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(3 marks)

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7. Solve the following simultaneous equations

$$3x - 8y = 17$$

$$7x - 8y = 5$$

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

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

(3 marks)

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8. Solve the following simultaneous equations

$$3x + 7y = 4$$

$$2x + 5y = 1$$

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

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

(3 marks)

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9. Solve the following simultaneous equations

$$4x + y = 5$$

$$5x + 3y = 1$$

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

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

(3 marks)

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10. Solve the following simultaneous equations

$$3x + 2y = 6$$

$$x + 6y = 8$$

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

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

(3 marks)

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11. Solve the following simultaneous equations

$$4x + y = 5$$

$$5x + 3y = 1$$

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

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

(3 marks)

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12. Solve the following simultaneous equations

$$3x - 2y = 2$$

$$5x - 3y = 1$$

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

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

(3 marks)

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13. Solve the following simultaneous equations

$$5x - 2y = 9$$

$$6x + 5y = 3$$

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

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

(3 marks)

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14. Solve the following simultaneous equations

$$11x - 2y = 13$$

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

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

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

(3 marks)

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15. 4 apples and 2 bananas cost £10.  
2 apples and 2 bananas cost £8.  
Find the cost of 1 apple and 1 banana.

1 apple = £ .....

1 banana = £ .....

(3 marks)

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16. The weight of 3 guinea pigs and 9 rats is  $11\text{kg}$ .  
The weight of 3 guinea pigs and 2 rats is  $5\text{kg}$ .  
Find the total weight of 5 guinea pigs and 5 rats.  
*Give your answer correct to 3 significant figures.*

.....  $\text{kg}$

(3 marks)

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17. A T-shirt costs £9 more than a jumper.  
The total price of 2 T-shirts and 1 jumper is £36.  
Find the total cost of 3 T-shirts and 5 jumpers.

£ = .....

(3 marks)

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18. 3 cups of tea and 3 cups of coffee cost £4. 20.  
2 cups of tea and 4 cups of coffee cost £3. 80.  
Find the total cost of 5 cups of tea and 4 cups of coffee.

£ = .....

(3 marks)

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19. Solve the following simultaneous equations

$$\begin{aligned}x &= 2y - 3 \\2x + 5y &= 12\end{aligned}$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(3 marks)

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20. Solve the following simultaneous equations

$$\begin{aligned}5x &= 3y + 18 \\x &= -2y + 27\end{aligned}$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(3 marks)

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