SIMULTANEOUS EQUATIONS (LINEAR)

[ESTIMATED TIME: 75 minutes]

GCSE

(+ IGCSE) EXAM QUESTION PRACTICE

1. **[3 marks]**

Solve the simultaneous equations

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

Show clear algebraic working.

$x =$ .....

$y =$ .....

2. **[3 marks]**

Showing clear algebraic working, solve the simultaneous equations

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

$a =$ .....

$b =$ .....

Questions compiled by:
@Maths4Everyone

3. **[3 marks]**

Solve the simultaneous equations

$$3x + y = 4$$
$$5x - y = 8$$

You must show sufficient working.

$x =$ .....

$y =$ .....

4. **[3 marks]**

Solve the simultaneous equations

$$5x + y = 17$$

$$x + y = 3$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

5. **[3 marks]**

Solve the simultaneous equations

$$c + 5d = -13$$
$$4c - 5d = 48$$

Show clear algebraic working.

$c =$ .....

$d =$ .....

6. **[3 marks]**

Solve $x + 2y = 3$

$x - y = 6$

Show clear algebraic working.

$x =$ .....

$y =$ .....

7. **[3 marks]**

Solve the simultaneous equations

$$y = x + 3$$
$$y = 7x$$

x = ...

y = ...

8. **[3 marks]**

Solve the simultaneous equations

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

Show clear algebraic working.

9. **[3 marks]**

Solve the simultaneous equations

$$5x + 4y = 3$$
$$x - 2y = 2$$

You must show sufficient working.

$x =$ .....

$y =$ .....

10. **[3 marks]**

Solve the simultaneous equations

$$6x + 5y = 5$$

$$3x - 10y = 15$$

$x =$ .....

$y =$ .....

11. **[3 marks]**

Solve the simultaneous equations

$$2x + 5y = 16$$
$$4x + 3y = 11$$

$x =$ .....

$y =$ .....

12. **[3 marks]**

Solve the simultaneous equations

$$8x - 4y = 7$$
$$12x - 8y = 6$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

13. **[3 marks]**

Solve the simultaneous equations

$2x - 5y = 13$
$6x + 3y = 3$

$x =$ .....

$y =$ .....

14. **[3 marks]**

Solve the simultaneous equations

$$2x - 3y = 3$$
$$3x + 6y = 1$$

$x =$ .....

$y =$ .....

15. **[4 marks]**

(a) Solve the simultaneous equations

$$2x + 3y = 4$$
$$6x + 5y = 8$$

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

(3)

(b) Write down the coordinates of the point of intersection of the two lines whose equations are

$2x + 3y = 4$ and
$6x + 5y = 8$

(....., ...)

(1)

16. **[4 marks]**

Solve $4x + 3y = 6$

$3x + 5y = -1$

Show clear algebraic working.

$x =$ .....

$y =$ .....

17. **[4 marks]**

Solve the simultaneous equations

$$6x - 5y = 13$$
$$4x - 3y = 8$$

$x =$ .....

$y =$ .....

18. **[5 marks]**

(a) Solve the simultaneous equations

$$2x - 3y = 9$$
$$5x + 4y = 11$$

$x =$ .....

$y =$ .....

(4)

(b) Write down the coordinates of the point of intersection of the two lines whose equations are $2x - 3y = 9$ and $5x + 4y = 11$

(..... , ...)

(1)

19. **[4 marks]**

Solve the simultaneous equations $4x + 5y = 13$
$3x - 2y = 27$

Show clear algebraic working.

$x =$ .....

$y =$ .....

20. **[4 marks]**

Solve the simultaneous equations

$$3x + 4y = 6$$

$$5x + 6y = 11$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

21. **[5 marks]**

(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)

22. **[5 marks]**

(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)