Simultaneous Equations (Linear) Worksheet

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Questions in past papers often come up combined with other topics.
Topic tags have been given for each question to enable you to know if you can do the question or whether you need to wait to cover the additional topic(s).

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Qualification: GCSE Edexcel Higher

Areas: Algebra

Subtopics: Solving Simultaneous Equations - Linear

Paper: Paper-3H-Calculator / Series: 2017-June / Difficulty: Easy / Question Number: 2

2 Solve the simultaneous equations

$$3x + y = -4$$
$$3x - 4y = 6$$

$x =$ .....

$y =$ .....

(Total for Question 2 is 3 marks)

10 Solve

$$3x + 2y = 15$$
$$10x - 4y = 2$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 10 is 3 marks)

9 Solve the simultaneous equations

$$x + y = 15$$
$$7x - 5y = 3$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 9 is 3 marks)

Qualification: GCSE Edexcel Higher

Areas: Algebra

Subtopics: Solving Simultaneous Equations - Linear

Paper: Paper-1H-Non-Calculator / Series: 2018-November / Difficulty: Easy / Question Number: 6

6 Solve the simultaneous equations

$$5x + y = 21$$
$$x - 3y = 9$$

$x =$ .....

$y =$ .....

(Total for Question 6 is 3 marks)

8 Solve the simultaneous equations

$$4x + 2y = 9$$
$$x - 4y = 9$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 8 is 3 marks)

9 Solve the simultaneous equations

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

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 9 is 3 marks)

Qualification: IGCSE Edexcel A Higher

Areas: Algebra

Subtopics: Solving Simultaneous Equations - Linear

Paper: Paper-2H / Series: 2019-June / Difficulty: Easy / Question Number: 9

9 Solve the simultaneous equations

$$x + 2y = -0.5$$
$$3x - y = 16$$

Show clear algebraic working.

$x =$.....

$y =$.....

(Total for Question 9 is 3 marks)

7 Solve the simultaneous equations

$$3x + 5y = 6$$
$$7x - 5y = -11$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 7 is 3 marks)

12 Solve the simultaneous equations

$$7x - 2y = 34$$
$$3x + 5y = -3$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 12 is 4 marks)

Qualification: IGCSE Edexcel A Higher
Areas: Algebra
Subtopics: Solving Simultaneous Equations - Linear
Paper: Paper-1HR / Series: 2020-November / Difficulty: Easy / Question Number: 12

12 Solve the simultaneous equations

$$7x + 2y = 5.5$$
$$3x - 5y = 17$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 12 is 4 marks)

Qualification: IGCSE Edexcel A Higher

Areas: Algebra

Subtopics: Solving Simultaneous Equations - Linear

Paper: Paper-2HR / Series: 2021-January / Difficulty: Easy / Question Number: 12

12 Solve the simultaneous equations $2x + 7y = 17$
$5x + 3y = -1$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 12 is 4 marks)

Qualification: IGCSE Edexcel A Higher

Areas: Algebra

Subtopics: Solving Simultaneous Equations - Linear

Paper: Paper-2H / Series: 2021-June / Difficulty: Easy / Question Number: 8

8 Solve the simultaneous equations

$$5a + 2c = 10$$
$$2a - 4c = 7$$

Show clear algebraic working.

$a =$ .....

$c =$ .....

(Total for Question 8 is 3 marks)

10 Solve the simultaneous equations

$$3x + 5y = 3.1$$
$$6x + 3y = 3.75$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 10 is 3 marks)

14 Solve the simultaneous equations

$$3x - 5y = 25$$
$$4x + 3y = 14$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 14 is 4 marks)

10 Solve the simultaneous equations

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

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 10 is 3 marks)

Qualification: GCSE Edexcel Higher

Areas: Algebra

Subtopics: Solving Simultaneous Equations - Linear

Paper: Paper-1H-Non-Calculator / Series: 2022-November / Difficulty: Easy / Question Number: 12

12 Solve the simultaneous equations

$$5x + 2y = 11$$
$$4x + 3y = 6$$

$x =$ .....

$y =$ .....

(Total for Question 12 is 4 marks)

6 Solve the simultaneous equations

$$x + 2y = 15$$
$$4x - 6y = 4$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 6 is 3 marks)

7 Solve the simultaneous equations

$$5x + 4y = -2$$
$$2x - y = 4.4$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 7 is 3 marks)

9 Solve the simultaneous equations

$$2x + 9y = 14.5$$
$$7x + 3y = 8$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 9 is 3 marks)

11 Use algebra to solve the simultaneous equations

$$2x + 6y = 5$$
$$3x - 4y = -12$$

$x =$ .....

$y =$ .....

(Total for Question 11 is 4 marks)

Qualification: GCSE Edexcel Higher

Areas: Algebra

Subtopics: Solving Simultaneous Equations - Linear

Paper: Paper-1H-Non-Calculator / Series: 2024-June / Difficulty: Easy / Question Number: 10

10 Solve the simultaneous equations

$$5x - 2y = 23$$
$$2x - 3y = 18$$

$x =$ .....

$y =$ .....

(Total for Question 10 is 4 marks)

12 Solve the simultaneous equations

$$4x + 3y = 9.6$$
$$6x + 5y = 16.8$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 12 is 4 marks)

10 Solve the simultaneous equations

$$6x + 4y = 1$$
$$3x + 5y = 8$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 10 is 3 marks)

9 Solve the simultaneous equations

$$3x + y = 13$$
$$x - 2y = 9$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 9 is 3 marks)

10 Solve the simultaneous equations

$$7x + 3y = 20$$
$$3x + 5y = 3$$

Show clear algebraic working.

$x =$ .....

$y =$ .....

(Total for Question 10 is 4 marks)

Qualification: GCSE Edexcel Higher

Areas: Algebra

Subtopics: Solving Simultaneous Equations - Linear

Paper: Paper-3H-Calculator / Series: Specimen-Set-2 / Difficulty: Easy / Question Number: 11

11 Solve the simultaneous equations

$$2x - 4y = 19$$
$$3x + 5y = 1$$

$x =$ .....

$y =$ .....

(Total for Question 11 is 4 marks)

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

$2x - y = 7$

(3)

(b) Find the integer value of x that satisfies both the inequalities

$x + 5 > 8$ and $2x - 3 < 7$

(3)

(Total for Question 5 is 6 marks)

Qualification: GCSE Edexcel Higher

Areas: Algebra

Subtopics: Money Problems, Solving Simultaneous Equations - Linear

Paper: Paper-1H-Non-Calculator / Series: 2017-November / Difficulty: Somewhat Challenging / Question Number: 11

11 3 teas and 2 coffees have a total cost of £7.80
5 teas and 4 coffees have a total cost of £14.20

Work out the cost of one tea and the cost of one coffee.

tea £.....

coffee £.....

(Total for Question 11 is 4 marks)

6 Alison buys 5 apples and 3 pears for a total cost of $1.96
Greg buys 3 apples and 2 pears for a total cost of $1.22

Michael buys 10 apples and 10 pears.

Work out how much Michael pays for his 10 apples and 10 pears.
Show your working clearly.

$.....

(Total for Question 6 is 5 marks)