Name:

Exam Style Questions

Simultaneous Equations

Corbettmaths

Equipment needed: Calculator, pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Video 295

Answers and Video Solutions

1. Solve the simultaneous equations

$$5x + 3y = 41$$
$$2x + 3y = 20$$

x = ... y = ...

(3)

---

2. Solve the simultaneous equations

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

x = ... y = ...

(3)

3. Solve the simultaneous equations

$$x + 7y = 64$$
$$x + 3y = 28$$

x = ... y = ...

(3)

---

4. Solve the simultaneous equations

$$4x - 4y = 24$$
$$x - 4y = 3$$

x = ... y = ...

(3)

5. Solve the simultaneous equations

$$2x + 4y = 14$$

$$4x - 4y = 4$$

x = ... y = ...

(3)

---

6. David buys 2 scones and 2 coffees in a shop and the cost is £18.
Ellie buys 3 scones and 2 coffees in the same shop and they cost £22.

Form two equations and solve to find the cost of each scone and each coffee.

Scone = £..... Coffee = £.....

(4)

7. Alan and Connor have £6.70 in total.
Alan has £1.70 more than Connor.

Let a be the amount of money Alan has.
Let c be the amount of money Connor has.

Set up a pair of simultaneous equations and solve to find out how much each person has.

Alan = ... Connor = ...

(3)

---

8. Solve the simultaneous equations

$$6x + y = -2$$

$$6x - 3y = 14$$

x = ... y = ...

(3)

9. Solve the simultaneous equations

$$2x + 4y = 26$$
$$3x - y = 4$$

x = ... y = ...

(3)

---

10. Solve the simultaneous equations

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

Do not use trial and improvement

x = ... y = ...

(4)

11. Solve the simultaneous equations

$$3x - 2y = 14$$
$$x + 2y = 10$$

x = ... y = ...

(3)

---

12. Solve the simultaneous equations

$$3x + 5y = 1$$
$$2x - 3y = 7$$

x = ... y = ...

(4)

13. Solve the simultaneous equations

$$3x - y = 23$$
$$2x + 3y = 8$$

x = ... y = ...

(3)

---

14. Solve the simultaneous equations

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

x = ... y = ...

(3)

15. Solve the simultaneous equations

$$2x + 9y = 43$$
$$3x + 2y = 7$$

x = ... y = ...

(3)

---

16. Solve the simultaneous equations

$$5x - 3y = 24$$
$$2x - 4y = 4$$

x = ... y = ...

(3)

17. A museum sells adult tickets or child tickets.

Fozia buys 4 adult tickets and 1 child ticket for £120

Sami buys 5 adult tickets and 3 child tickets for £171

Work out the cost of each type of ticket.

Adult ticket £ .....

Child ticket £ .....

(4)

---

18. Solve the simultaneous equations

$$4x + 3y = 7.5$$
$$3x - 5y = 10.7$$

x = ... y = ...

(3)

19. Solve the simultaneous equations

$$2y = 8x + 11$$
$$2x + 8y = 27$$

x = ... y = ...

(3)

---

20. Find the coordinates of the point where the straight lines below cross.

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

(..... , ...)

(4)

21. Solve the simultaneous equations

$$3a + c = 8$$
$$2a - c = 7$$

a = ... c = ...

(3)

---

22. Solve the simultaneous equations

$$9x - 6y = 114$$
$$5x - 9y = 30.75$$

x = ... y = ...

(4)

23. Solve the simultaneous equations

$$2y = x + 10$$
$$y = 2x - 7$$

x = ... y = ...

(3)

---

24. Solve the simultaneous equations

$$4x - y = 17$$
$$y = x - 2$$

x = ... y = ...

(3)

25. Three bananas and two pears cost £2.07
Five bananas and three pears cost £3.33

Find the cost of ten bananas and ten pears.

.....

(4)

---

26. Solve the simultaneous equations

$$5x + 2y = -34$$
$$4x - 3y = -41$$

x = ... y = ...

(4)

27. Albie is training for a marathon.

He jogs either route A or route B.

During April, he jogs route A nine times and route B five times.
Route B is 8 miles longer than route A.
In total, he jogs 89 miles in April.

In May, he will start jogging route C.
Route C is 20% longer than route B.

Work out the length of route C.

.....miles

(6)

28. Solve the simultaneous equations

$$6x + 2y = 13c$$
$$x + 2y = -2c$$

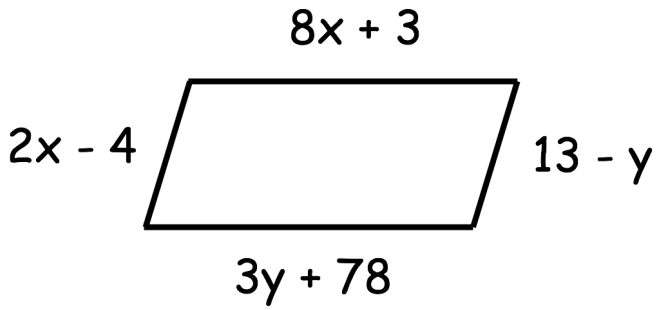
where c is a constant

Give your answers in terms of c.

x = ... y = ...

(4)

29. Shown below is a parallelogram.
Each side is measured in centimetres.



Work out the perimeter of the parallelogram.

.....cm
(6)