

Simultaneous Equations: Forming and Solving

1 Let line 2 Table 3 Two different facts? 4 Test 5 Solve 6 Sentence

1

3 notebooks and 2 pens cost £5.40.
1 notebook and 2 pens cost £2.60.
Find the cost of each.

Let $n =$ the cost of one notebook in pence
 $p =$ the cost of one pen in pence

	notebooks	pens	pence
(1)	$3n +$	$2p =$	540
(2)	$n +$	$2p =$	260
(1) - (2)			

Check _____

Answer _____

2

2 tins of beans and 3 jars of jam weigh 2040 g. 2 tins and 1 jar weigh 1240 g. Find the weight of each.

Let $t =$ the weight of one tin in grams
 $j =$ the weight of one jar in grams

	tins	jars	grams
(1)			
(2)			
(1) - (2)			

Check _____

Answer _____

3

9 people pay £41 at a museum. Adults pay £5 and children £4. How many adults and children are there?

Let $a =$ the number of adults
 $c =$ the number of children

Check _____

Answer _____

4

3 trucks and 5 vans carry 395 crates. 1 truck and 2 vans carry 140 crates. How many crates does each one carry?

Let $t =$ _____
 $v =$ _____

Check _____

Answer _____

5

A jacket costs £18 more than a shirt. Together they cost £62. Find the cost of each.

Let $j =$ _____
 $s =$ _____

Check _____

Answer _____

6

A car park has 4 times as many car spaces as van spaces. It has 150 spaces in all. How many of each are there?

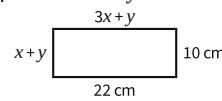
Let $c =$ _____
 $v =$ _____

Check _____

Answer _____

7

The opposite sides of this rectangle are equal. Find x and y .



Check _____

Answer _____

8

3 jars of honey and 2 boxes of tea weigh 1.6 kg. 1 jar and 1 box weigh 650 g. Find the weight of each.

Let $h =$ _____
 $t =$ _____

Check _____

Answer _____

Simultaneous Equations: Forming and Solving *further practice*

9

Twice the first of two numbers plus the second is 17. The first number is 1 more than the second. Find the two numbers.

Answer _____

10

A plumber charges a call out fee and then the same amount for each hour. A 2 hour job costs £110. A 5 hour job costs £215. Find the call out fee and the cost of an hour.

Answer _____

11

A rectangle is 3 times as long as it is wide. Its perimeter is 64 cm. Find its length and its width.

Answer _____

12

A minibus carries 12 people and a taxi carries 4. In all, 7 vehicles carry 52 people, with every seat full. How many minibuses and how many taxis are there?

Answer _____

13

A family of 7 pays £44 for tickets. An adult ticket costs £8 and a child ticket £5. Ria's working:

Let $a =$ number of adults, $c =$ number of children.
 $a + c = 7$ $5a + 8c = 44$
 $5a + 5c = 35$, so $3c = 9$, $c = 3$, $a = 4$.
"There were 4 adults and 3 children."

Find Ria's mistake and give the right answer. What check would have caught it?

Answer _____

14

3 big and 4 small boxes hold 230 books. 5 big and 3 small boxes hold 310 books. How many books does each size of box hold?

Answer _____

15

Write a story that gives the equations $a + c = 8$ and $5a + 3c = 34$. Then solve them and answer in a sentence.

Answer _____

16

Sam reads: "8 people pay £45 for tickets. An adult ticket costs £7 and a child ticket £4." Explain why this cannot be true.

Answer _____