Simultaneous equations: what a solution is

1

Complete both tables. Find the pair that is in both.

$x + y = 8$

x	0	2	4	5	6
y	8				

$x - y = 2$

x	0	2	4	5	6
y	−2				

Pair in both: $x =$ _____ $y =$ _____

2

Complete both tables. Find the pair that is in both.

$2x + y = 9$

x	0	1	2	3	4
y					

$x + y = 6$

x	0	1	2	3	4
y					

Pair in both: $x =$ _____ $y =$ _____

3

Complete both tables. Find the pair that is in both.

$x + 2y = 10$

x	0	2	4	6	8
y					

$y - x = -1$

x					
y					

Pair in both: $x =$ _____ $y =$ _____

4

Make a table of pairs for each equation. Find the pair that is in both.

$3x + y = 13$

x					
y					

$x + y = 5$

x					
y					

Pair in both: $x =$ _____ $y =$ _____

5

Does (4, 3) solve both equations? Check it in each one.

(1) $2x + y = 11$

(2) $x + 3y = 13$

(1) $2 \times 4 + 3 =$ _____ ☐

(2) $4 + 3 \times 3 =$ _____ ☐

Answer _____

6

Does (7, 1) solve both equations? Check it in each one.

(1) $x + 3y = 10$

(2) $2x - y = 6$

(1) $7 + 3 \times 1 =$ _____ ☐

(2) _____ ☐

Answer _____

7

Does (2, −3) solve both equations? Check it in each one.

(1) $2x + y = 1$

(2) $x - 3y = 11$

(1) _____ ☐

(2) _____ ☐

Answer _____

8

Does (4, 5) solve both equations? Does (5, 4)?

(1) $x + y = 9$

(2) $3x - y = 11$

Answer _____

Simultaneous equations: what a solution is *further practice*

9

Does (3, −1) solve both $2x + 5y = 1$ and $4x - y = 11$? Show your checks.

Answer _____

10

Which pair solves both $x + 2y = 11$ and $3x - y = 5$? Show your checks.

A (1, 5)
B (3, 4)
C (5, 3)

Answer _____

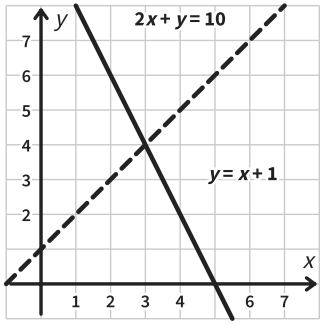
11

Kai says (2, 3) solves both $4x - y = 5$ and $x + 2y = 10$, because $4 \times 2 - 3 = 5$. Is Kai right? Explain.

Answer _____

12

Write down the solution of these simultaneous equations.
Check it in both.



Answer _____

13

The pair $(3, k)$ fits $2x + y = 10$. Find k.
Does $(3, k)$ also fit $x - y = 1$?

Answer _____

14

The lines $y = x + 2$ and $x + y = 8$ cross at one point. Use tables of pairs to find it, without drawing.

Answer _____

15

A notebook costs x pounds and a pen costs y pounds. A notebook and two pens cost £7. A notebook costs £1 more than a pen. Use a table of pairs to find both prices.

Answer _____

16

Write down three different pairs that fit $2x + y = 6$. Explain why one equation with two unknowns has lots of solutions.

Answer _____