

Simultaneous equations: what a solution is

Exit ticket ANSWERS Name _____

- 1 Does (5, -2) solve both $2x + 3y = 4$ and $x - y = 7$?

Yes

- 2 Does (1, 6) solve both $4x + y = 10$ and $2x + y = 9$?

No: $2 \times 1 + 6 = 8 \neq 9$

- 3 The pair (k, 3) fits $x + 2y = 10$. Find k. Does it also fit $3x - y = 9$?

k = 4, yes

- 4 Write down a pair that fits $x + y = 9$ but not $y = 2x$.
Use tables to find the pair that fits both.

e.g. (5, 4); both: $x = 3, y = 6$

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- 1 Does (5, -2) solve both $2x + 3y = 4$ and $x - y = 7$?

Yes

TESTS

Checking a pair in both equations

LOOK FOR

No swapped the pair: x is the first number, y the second

FIX IT

Does (3, -2) solve both $2x + 5y = -4$ and $x - 2y = 7$?

Yes

- 2 Does (1, 6) solve both $4x + y = 10$ and $2x + y = 9$?

No: $2 \times 1 + 6 = 8 \neq 9$

TESTS

A pair must fit both equations, not just one

LOOK FOR

Yes checked the first equation only

FIX IT

Does (2, 5) solve both $3x + y = 11$ and $x + 2y = 13$?

No: $2 + 2 \times 5 = 12 \neq 13$

- 3 The pair $(k, 3)$ fits $x + 2y = 10$. Find k . Does it also fit $3x - y = 9$?

$k = 4$, yes

TESTS

Finding a missing value, then checking it in the other equation

LOOK FOR

$k = 7$ did $10 - 3$: left out the 2 in front of y

FIX IT

The pair $(k, 2)$ fits $3x + 4y = 23$. Find k . Does it also fit $2x - y = 9$?

$k = 5$, no ($8 \neq 9$)

- 4 Write down a pair that fits $x + y = 9$ but not $y = 2x$. Use tables to find the pair that fits both.

e.g. (5, 4); both: $x = 3, y = 6$

TESTS

Each equation has many pairs; the solution fits both

LOOK FOR

both: $x = 6, y = 3$ swapped the pair: 3 is not 2×6

FIX IT

Write down a pair that fits $x + y = 12$ but not $y = 3x$.
Find the pair that fits both.

e.g. (5, 7); both: $x = 3, y = 9$