

Simultaneous equations: substitution

Exit ticket **ANSWERS** Name _____

- 1 Solve the simultaneous equations.

(1) $y = 4x - 1$

(2) $2x + y = 2$

$$x = \frac{1}{2}, y = 1$$

- 2 $y = 4 - x$ is substituted into $5x - 2y = 6$.
Which line is right?

A $5x - 8 - 2x = 6$ B $5x - 8 + 2x = 6$ C $5x - 4 + x = 6$

B

- 3 Solve the simultaneous equations.

(1) $y = 2x - 5$

(2) $3x + 2y = 25$

$$x = 5, y = 5$$

The Maths Habit

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TESTS

Substituting, then dividing the right way round

LOOK FOR

 $x = 2, y = 7$ $6x = 3$ divided the wrong way round

FIX IT

Solve $y = 2x + 1$ and $6x + y = 5$

$x = \frac{1}{2}, y = 2$

2 $y = 4 - x$ is substituted into $5x - 2y = 6$. Which line is right?A $5x - 8 - 2x = 6$ B $5x - 8 + 2x = 6$ C $5x - 4 + x = 6$

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TESTS

Expanding the bracket: the minus times every term

LOOK FOR

A the sign of the second term: $-2 \times -x$ is $+2x$ C did not multiply 4 and x by 2

FIX IT

Substitute $y = 5 - x$ into $4x - 3y = 6$ and expand the bracket.

$4x - 15 + 3x = 6$

3 Solve the simultaneous equations.

(1) $y = 2x - 5$

(2) $3x + 2y = 25$

$x = 5, y = 5$

TESTS

The whole substitution method, both values

LOOK FOR

 $x = 5$ stopped at x : find y too

FIX IT

Solve $y = 3x - 4$ and $2x + 3y = 32$

$x = 4, y = 8$