

Simultaneous equations: multiply first

Use it when the number of y is not the same in both equations.

1

Multiply first
Multiply one equation so both have the same number of y.

equation 2

 ×

number

every term, both sides of the =

2

Line them up
Write one equation under the other, with the same y in both.

x

x

x

y

y

 = total 1

x

y

y

 = new total 2

the y tiles line up

3

Subtract
The extra tiles are worth the difference.

x

x

x

y

y

 = total 1

x

y

y

 = new total 2

extra x tiles = total 1 – new total 2

4

Find x
Share it between the x tiles.

X

 =

difference

extra x tiles

5

Substitute
Put your x into the simpler equation. Work out y.

x value

 in place of **x**

6

Check
Put both into the other equation.

It gives the right total ✓

The Maths Habit

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