

Simultaneous Equations: Multiply Both Equations

1

Solve the simultaneous equations.

(1) $3x + 4y = 10$

(2) $2x + 3y = 7$

(1) $\times 2$

(3) $6x + 8y = 20$

(2) $\times 3$

(4) $6x + 9y = 21$

$x = \text{---}, y = \text{---}$

Check ---

2

Solve the simultaneous equations.

(1) $3x + 4y = 10$

(2) $2x - 3y = 1$

(1) $\times 3$

(3) $9x + 12y = 30$

$x = \text{---}, y = \text{---}$

Check ---

3

Solve the simultaneous equations.

(1) $5x + 3y = 27$

(2) $2x + 5y = 26$

$x = \text{---}, y = \text{---}$

Check ---

4

Solve the simultaneous equations.

(1) $2x + 5y = 24$

(2) $3x - 4y = 13$

$x = \text{---}, y = \text{---}$

Check ---

5

Solve the simultaneous equations.

(1) $4x + 3y = 11$

(2) $8x - 5y = -33$

$x = \text{---}, y = \text{---}$

Check ---

6

Solve the simultaneous equations.

(1) $4x - 5y = -5$

(2) $6x - 7y = -9$

$x = \text{---}, y = \text{---}$

Check ---

7

Two numbers are a and b . 3 times a plus 2 times b is 26. Twice a plus 5 times b is 32. Write two equations and solve them.

$a = \text{---}, b = \text{---}$

Check ---

8

Solve the simultaneous equations.

(1) $-2x + 5y = 17$

(2) $3x + 4y = 32$

$x = \text{---}, y = \text{---}$

Check ---

Simultaneous Equations: Multiply Both Equations *further practice*

9



Which letter is cheaper to eliminate?
Solve the simultaneous equations.

- (1) $5x + 2y = 3$
- (2) $3x + 4y = 13$

Answer _____

10



At a climbing wall, an adult session costs £ a and a junior session costs £ j .
3 adult and 4 junior sessions cost £68.
2 adult and 5 junior sessions cost £64.
Find the cost of each session.

Answer _____

11



Ali solves these simultaneous equations.

- (1) $2x + 3y = 12$
- (2) $5x + 4y = 23$

Ali writes (1) $\times 5$: $10x + 15y = 12$.
What has Ali done wrong?
Solve the equations.

Answer _____

12



A large parcel weighs L kg and a small parcel weighs S kg. 3 large and 2 small parcels weigh 36 kg.
5 large and 3 small parcels weigh 58 kg. How much does each parcel weigh?

Answer _____

13



Solve the simultaneous equations.

- (1) $6x + 4y = 7$
- (2) $4x + 6y = 8$

Answer _____

14



Solve the simultaneous equations.

- (1) $2y = 3x - 1$
- (2) $4x + 5y = 55$

Answer _____

15



The lines (1) and (2) cross at the point P. Find the coordinates of P.

- (1) $3x = 4y + 1$
- (2) $5x + 6y = 27$

Answer _____

16



Which letter would you eliminate, and what would you multiply by?
Explain why, then solve.

- (1) $4x + 9y = 7$
- (2) $6x - 3y = 27$

Answer _____