



Solve systems of equations by substitution

1

Solve for the variable by substituting the second equation into the first

$$8p + z = 54$$

$$z = 6$$

$$p = ?$$

A

$$p = 8$$

B

$$p = 7$$

C

$$p = 6$$

D

$$p = 9$$

E

$$p = 5$$

F

$$p = 4$$

2

Substitute the second variable equation into the first equation to form a single solvable equation

$$\begin{aligned} 9t - n &= 12 \\ n &= 3t \\ t &=? \end{aligned}$$

A

$$9t - 3t = 12$$

B

$$5t + 3 = t$$

C

$$9t - 5t = 12$$

D

$$9t - 4t = 12$$

E

$$9t + 3t = 12$$

F

$$9t + 3 = 12$$

3

Substitute the second equation into the first equation to form a single solvable equation

$$6m + 5p = 108$$

$$p = 5m + 3$$

$$m = ?$$

A

$$5m + 6 = 5m + 6$$

B

$$6m + 25m + 15 = 108$$

C

$$6m - 15m = 108$$

D

$$25m + 5m + 1 = 108$$

E

$$6m + 25m - 15 = 108$$

F

$$15m + 5m + 3 = 108$$

4

Solve for the variable by substituting the second equation into the first

$$9w - z = 3$$

$$z = 8w$$

$$w = ?$$

A

$$w = 1$$

B

$$w = 3$$

C

$$w = 5$$

D

$$w = 2$$

E

$$w = 6$$

F

$$w = 8$$

5

Solve for the variable by substituting the second equation into the first

$$7m - p = 5$$

$$p = 2m + 10$$

$$m = ?$$

A

$$m = 4$$

B

$$m = 3$$

C

$$m = 5$$

D

$$m = 2$$

E

$$m = 1$$

F

$$m = 6$$

6

Is $(x, y) = (-3, 4)$ a solution to this system of linear equations?

$$4x + y = -10$$

$$3x + 3y = -3$$

A

No

B

Yes

7

Find the intersection point of these two lines

$$y = 7x + 4$$

$$y = -5x - 5$$

A

$$(2.25, -2.25)$$

B

$$(-5.75, -3.25)$$

C

$$(-2.75, -2.25)$$

D

$$(-1.75, -3.25)$$

E

$$(-5.75, 2.75)$$

F

$$(-0.75, -1.25)$$

8

Find the intersection point of these two lines

$$y = -5x + 1$$

$$y = 5x + 2$$

A

$$(-4.1, -1.5)$$

B

$$(-1.1, 5.5)$$

C

$$(-0.1, 1.5)$$

D

$$(2.9, -2.5)$$

E

$$(1.9, -3.5)$$

F

$$(2.9, -0.5)$$



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9How would you check whether $(x, y) = (-3, 3)$ is a solution to this system of linear equations?

$$3x + 2y = -3$$

$$3x + y = -6$$

A

$$3(-3) + 2(3) = -3$$

$$3(-3) + (3) = -6$$

B

$$3(-3) + 2(3) = -3$$

$$3x + y = -6$$

C

$$3(3) + 2(-3) = -3$$

$$3(3) + (-3) = -6$$

D

$$3(-2) + 2(3) = -3$$

$$3(-2) + (3) = -6$$

10

Find the intersection point of these two lines

$$y = 1x - 2$$

$$y = -3x - 1$$

A $(1.25, -1.75)$

B $(0.25, -1.75)$

C $(-3.75, -3.75)$

D $(-4.75, 2.25)$

E $(3.25, -2.75)$

F $(-2.75, -6.75)$

11

Find the intersection point of these two lines

$$y = -2x - 3$$

$$y = 8x + 6$$

A $(-0.9, -1.2)$

B $(1.1, -6.2)$

C $(-0.9, 0.8)$

D $(-0.9, 2.8)$

E $(0.1, -5.2)$

F $(-5.9, 1.8)$

12

Find the intersection point of these two lines

$$y = 8x + 1$$

$$y = 5x - 6$$

A $(-6.33, -16.67)$

B $(-7.33, -20.67)$

C $(-4.33, -14.67)$

D $(-4.33, -20.67)$

E $(-2.33, -17.67)$

F $(-7.33, -22.67)$