



Interpret solutions to linear systems in context

1

Is $(x, y) = (2, 1)$ a solution to this system of linear equations?

$$2x + 4y = 4$$

$$2x + y = 1$$

A

Yes

B

No

2

Infinitely many solutions

A

The lines are the same line

B

The lines cross at one point

C

The lines are parallel

3

How would you check whether $(x, y) = (0, 4)$ is a solution to this system of linear equations?

$$x + 3y = 12$$

$$3x + y = 4$$

A

$$(0) + 3(4) = 12$$

$$3(0) + (4) = 4$$

B

$$(1) + 3(4) = 12$$

$$3(1) + (4) = 4$$

C

$$(0) + 3(4) = 12$$

$$3x + y = 4$$

D

$$(4) + 3(0) = 12$$

$$3(4) + (0) = 4$$

4

The lines are parallel

A

One solution

B

Infinitely many solutions

C

Zero solutions

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How many solutions does this system of linear equations have?



A

Zero solutions

B

One solution

C

Infinitely many solutions



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Which graph matches this system of linear equations?

$$x + y = -5$$

$$3x + 3y = -15$$

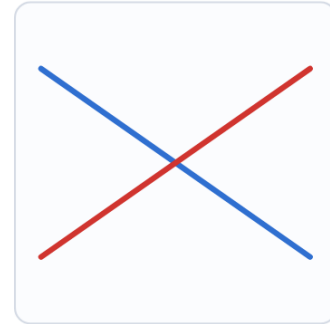
A



B

**7**

Which pair of linear equations matches this graph?



A

$$x + 2y = -7$$

$$2x + 4y = -14$$

B

$$3x + 3y = 4$$

$$2x + y = -7$$

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Zero solutions

A

$$3x + y = 4$$

$$4x + 2y = -2$$

B

$$2x + y = 2$$

$$2x + y = 1$$

9

How many solutions does this system of linear equations have?

$$2x + y = -8$$

$$2x + y = -9$$

A One solution

B Infinitely many solutions

C Zero solutions

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

$$4n + 4z = 112$$

$$z = 4n - 7$$

$$n = ?$$

A $16n - 4n - 5 = 112$

B $28n - 4n + 7 = 112$

C $4n + 16n - 28 = 112$

D $4n + 4 = n$

E $4n - 4n + 6 = 16$

F $4n - 28n = 112$

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

$$z = 12y + 3$$

$$z = 9y + 15$$

$$y = ?$$

A

$$y = 5$$

B

$$y = 6$$

C

$$y = 2$$

D

$$y = 4$$

E

$$y = 7$$

F

$$y = 3$$

12

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

$$5y + 8m = 52$$

$$m = 3y - 8$$

$$y = ?$$

A

$$y = 24$$

B

$$y = 64$$

C

$$y = 3$$

D

$$y = 2$$

E

$$y = 7$$

F

$$y = 4$$



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Solve for the variable by adding or subtracting multiples of the second equation to the first

$$\begin{array}{r} 9d - 12b = 87 \\ 3d - 12b = 51 \\ \hline d = ? \end{array}$$

A	$d = 2$	B	$d = 36$
C	$d = 3$	D	$d = -51$
E	$d = 12$	F	$d = 6$

14

Find the intersection point of these two lines

$$y = 7x + 7$$

$$x = -3$$

A	$(-7, -17)$	B	$(-3, -11)$
C	$(-3, -13)$	D	$(-3, -19)$
E	$(-3, -14)$	F	$(-3, -12)$

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Which equations represent what these meals cost

$$3 \text{ fries} + 2 \text{ donuts} = 7$$

$$6 \text{ fries} + 2 \text{ donuts} = 10$$

$$1 \text{ donut} = ?$$

A	$2d = 7$ $3f + 2d = 10$ $d = ?$	B	$3f + 2d = 7$ $6f + 2d = 10$ $d = ?$
C	$4d = 7$ $4f + 2d = 10$ $5d = ?$	D	$2d = 7$ $3f + 2d = 10$ $4d = ?$

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Find the intersection point of these two lines

$$y = -3x + 1$$

$$y = -6x + 7$$

A	$(-1, -7)$	B	$(1, -10)$
C	$(0, -5)$	D	$(2, -5)$
E	$(-3, -4)$	F	$(5, -3)$

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Find the intersection point of these two lines

$$y = 1x + 4$$

$$y = -2x + 3$$

A	$(-0.33, -0.33)$	B	$(-4.33, -0.33)$
C	$(-5.33, 1.67)$	D	$(-1.33, 6.67)$
E	$(-5.33, -1.33)$	F	$(-0.33, 3.67)$