

Systems of Linear Equations

- 1** Solve for the variable by substituting the second equation into the first

$$2r + 7m = 111$$

$$m = 9r - 12$$

$$r = ?$$

A $r = 84$

B $r = 3$

C $r = 6$

D $r = 63$

E $r = 2$

F $r = 1$

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

$$9d + 12b = 87$$

$$3d - 12b = -51$$

$$d = ?$$

A $d = 3$

B $d = 6$

C $d = 2$

D $d = 36$

E $d = -51$

F $d = 12$

- 3** How many solutions does this system of linear equations have?



A Zero solutions

B One solution

C Infinitely many solutions

- 4** How many solutions does this system of linear equations have?

$$4x + 4y = -6$$

$$4x + 4y = -11$$

A One solution

B Infinitely many solutions

C Zero solutions

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

$$2x + y = 4$$

$$2x + 4y = 16$$

A

$$2(4) + (0) = 4$$
$$2(4) + 4(0) = 16$$

B

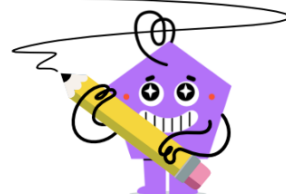
$$2(0) + (4) = 4$$
$$2x + 4y = 16$$

C

$$2(1) + (4) = 4$$
$$2(1) + 4(4) = 16$$

D

$$2(0) + (4) = 4$$
$$2(0) + 4(4) = 16$$



Systems of Linear Equations

- 6 Is $(x, y) = (-1, 3)$ a solution to this system of linear equations?

$$4x + 3y = 8$$

$$2x + 4y = 14$$

A

Yes

B

No

- 7 Find the intersection point of these two lines

$$y = 5x - 6$$

$$y = 8x + 6$$

A

 $(-3, -29)$

B

 $(-2, -23)$

C

 $(-8, -24)$

D

 $(-8, -27)$

E

 $(-2, -24)$

F

 $(-4, -26)$

- 8 Find the intersection point of these two lines

$$y = 6x + 5$$

$$y = 4x + 8$$

A

 $(4.5, 13)$

B

 $(-2.5, 17)$

C

 $(-2.5, 15)$

D

 $(1.5, 14)$

E

 $(-1.5, 13)$

F

 $(-2.5, 11)$

- 9 Which pair of linear equations matches this description?

Infinitely many solutions

A

$$2x + 4y = 2$$

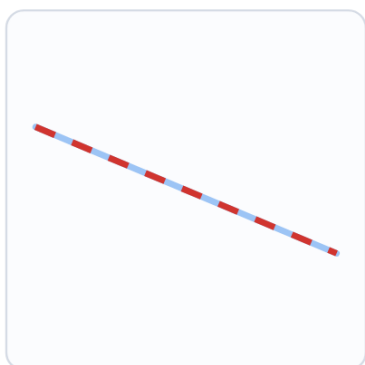
$$4x + 2y = 4$$

B

$$4x + 3y = 4$$

$$12x + 9y = 12$$

- 10 Which pair of linear equations matches this graph?



A

$$x + 4y = -6$$

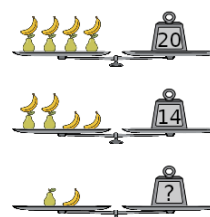
$$2x + 8y = -12$$

B

$$2x + 2y = 3$$

$$2x + 2y = 0$$

- 11 Which equations represent what these scales are showing



- 12 Some coins have a total value of \$0.10. There are 4 more Pennies than Nickels. What equations would help us solve?

\$0.10

