

1

A faucet is used to add water to a large bottle that already contained some water. After it has been filling for 3 seconds, the gauge on the bottle indicates that it contains 19 ounces of water. After it has been filling for 10 seconds, the gauge indicates the bottle contains 54 ounces of water. Let y be the amount of water in the bottle x seconds after the faucet was turned on. Write a linear equation that models the amount of water in the bottle in terms of x .

A $y = 5x + 44$

B $y = 5x + 4$

C $y = \frac{1}{5}x + \frac{92}{5}$

D $y = -5x + 34$

E Help!

x sec	y
3	19
10	54

$$m = \frac{54 - 19}{10 - 3} = 5$$

$$y - 19 = 5(x - 3)$$

$$y - 19 = 5x - 15$$

$$y = 5x + 4$$

Oct 18-4:44 PM

Find an equation of the line.

2 Through $(3, -4)$, perpendicular to the y -axis

A $3x + y = -4$

B $y = -4$

C $3x - 4y = 0$

D $x = 3$

E Help!

Oct 18-3:57 PM

Find an equation of the line.

- 3 With undefined slope, through $\left(-\frac{2}{9}, -2\right)$



- A $-\frac{2}{9}x - 2y = 0$
B $y = -2$
C $-\frac{2}{9}x + y = -2$
D $x = -\frac{2}{9}$
E Help!

Oct 18-3:57 PM

Find an equation of the line.

- 4 With slope 0, through $\left(-\frac{4}{7}, -9\right)$



- A $-\frac{4}{7}x - 9y = 0$
B $x = -\frac{4}{7}$
C $y = -9$
D $-\frac{4}{7}x + y = -9$
E Help!

Oct 18-3:57 PM

Find an equation of the line.

- 5 Through $(0, 17)$, perpendicular to the x -axis

- A $x = 0$
- B $y = 17$
- C $x + y = 17$
- D $y = 0$
- E Help!

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Find an equation of the line.

- 6 Through $(2, 7)$, parallel to the line $y = 3x + 5$.

$m = 3$

- A $y = 7$
- B $y = 2x + 7$
- C $y = 3x + 7$
- D $y = 3x + 1$
- E Help!

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

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Find an equation of the line.

- 7 Through (1, 4), perpendicular to the line $y = \frac{1}{2}x + 1$.

- A $x = 1$
 B $y = -2x + 6$
 C $y = 2x + 2$
 D $y = -\frac{1}{2}x + 1$
 E Help!

$$\rightarrow -\frac{2}{1} = m$$

$$m = -2$$

Find an equation of the line. $\rightarrow y - y_1 = m(x - x_1)$

$$y - 4 = -2(x - 1)$$

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

$$y = -2x + 6$$

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Find an equation of the line.

- 8 Perpendicular to the line $y = \frac{1}{3}x - 4$, and having the same y-intercept.

- A. $y = -3x - 4$
 B. $y = -\frac{1}{3}x - 4$
 C. $y = 3x - 4$
 D. $y = \frac{1}{3}x + 4$
 E. Help!

$$b = -4$$

$$\rightarrow m = -3$$

Find an equation of the line.

~~$$y - y_1 = m(x - x_1)$$~~

$$y = mx + b$$

$$y = -3x - 4$$

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Find an equation of the line.

- 9 Perpendicular to the line $y = \frac{3}{4}x - 3$,
and having the same x-intercept. $(4, 0)$

A. $y = -\frac{4}{3}x - 3$

B. $y = -\frac{4}{3}x + \frac{16}{3}$

C. $y = -\frac{4}{3}x - \frac{16}{3}$

D. $y = -\frac{4}{3}x + 3$

E. Help!

let $y=0$

$$0 = \frac{3}{4}x - 3$$

$$3 = \frac{3}{4}x$$

$$\frac{4}{3} \cdot 3 = x$$

$$4 = x$$

$$m = -\frac{4}{3}$$

$$y - 0 = -\frac{4}{3}(x - 4)$$

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Find an equation of the line.

- 10 Parallel to the line $2x + 3y = 1$, with
y-intercept -7 .

A. $y = \frac{2}{3}x - 7$

B. $y = -\frac{2}{3}x - 7$

C. $y = \frac{3}{2}x - 7$

D. $y = -\frac{3}{2}x - 7$

E. Help!

$$3y = -2x + 1$$

$$y = -\frac{2}{3}x + \frac{1}{3}$$

Find an equation of the line.

~~$$y - y_1 = m(x - x_1)$$~~

$$y = mx + b$$

$$y = -\frac{2}{3}x - 7$$

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Find an equation of the line.

- 11** Through $(-3, 4)$, perpendicular to the line $x = 2 + 5y$.

- A. $y = -5x + 4$
- B. $y = -5x - 11$
- C. $y = 5x + 4$
- D. $y = 5x - 11$
- E. Help!



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12 Solve by graphing:

$$\begin{cases} y = 2x - 3 \\ x + y = 3 \end{cases}$$

- A (0, -3)
- B (2, 1)
- C (1, 2)
- D (1, -1)
- E Infinitely many solutions
- F No solution

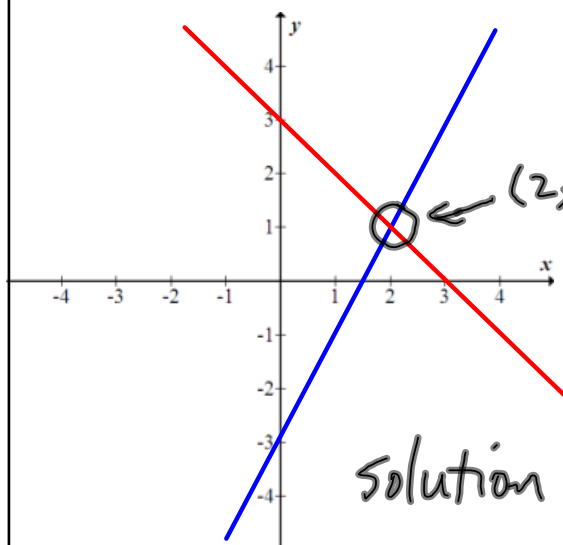


Nov 8-6:46 PM

Solve by graphing:

$$\begin{cases} y = 2x - 3 \\ x + y = 3 \end{cases}$$

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



solution to system: $(2, 1)$

Nov 8-6:46 PM