> TODAY'S AGENDA:

- Continue working on Khan Academy
- Mission: Engage NY Module 4
  > Systems of Equations with Graphing

- Today's Objective:
  > Students will be able to graph a line, given the equation of the line in Slope-Intercept Form

- Today's Standards:
  > 8.EE.C.8, 8.EE.C.8a, 8.EE.C.8b, HSA.REI.C.6, HSA.REI.D.11

Solutions to System of Equations

- What is a ***System of Equations***?
  - A System of Equations is a group of two or more equations.

- What is the Solution to a System of Equations?
  - The solution is the point(s) (as coordinates in (x,y) form) that make the equations true.

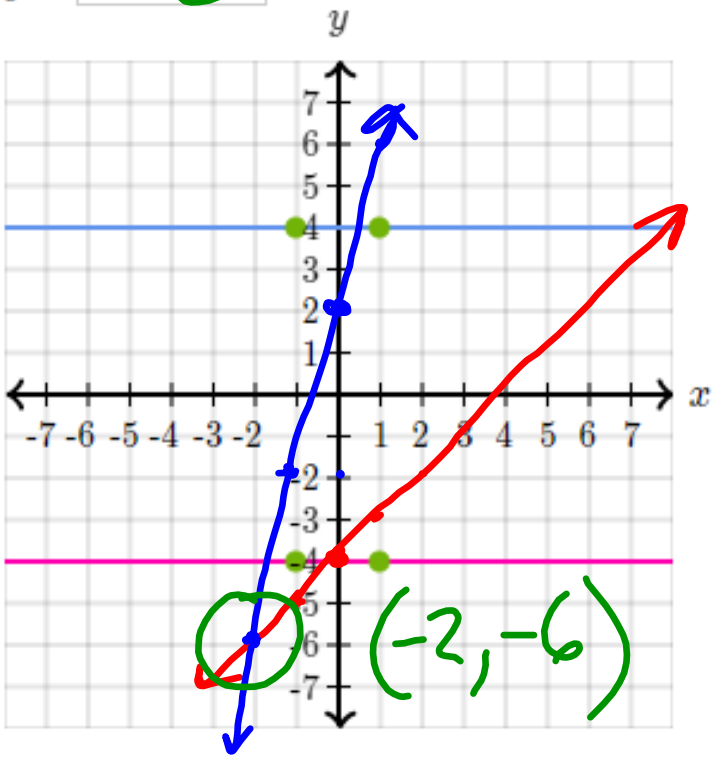
Find the solution to the system of equations.

You can use the interactive graph below to find the solution.

$$\begin{cases} y = x - 4 \\ y = 4x + 2 \end{cases}$$

$x =$ -2

$y =$ -6



① Check if equation is in y=mx+b form. If not, algebrically solve for y.

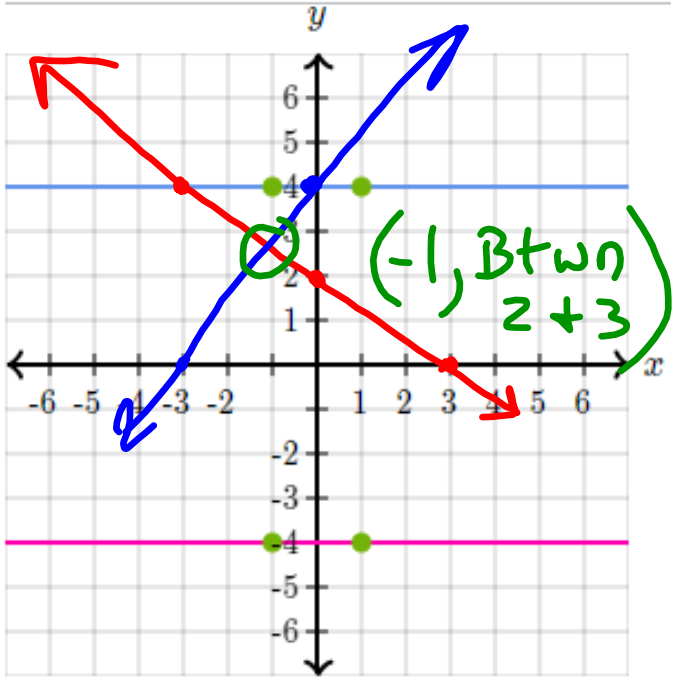
② Graph both equations.

③ The point where the lines intersect is the solution.

Estimate the solution to the system of equations.

You can use the interactive graph below to find the solution.

$$\begin{cases} 2x + 3y = 6 \\ -4x + 3y = 12 \end{cases}$$



(-1, Btwn 2 + 3)

① $2x + 3y = 6$

$-2x \quad -2x$

$\frac{3y}{3} = \frac{-2x + 6}{3}$

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

② $-4x + 3y = 12$

$+4x \quad +4x$

$\frac{3y}{3} = \frac{4x + 12}{3}$

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

Choose 1 answer:

(A) $x = -1, y = 3\frac{2}{3}$

● $x = -1, y = 2\frac{2}{3}$

(C) $x = 0, y = 3\frac{2}{3}$

(D) $x = 0, y = 2\frac{2}{3}$

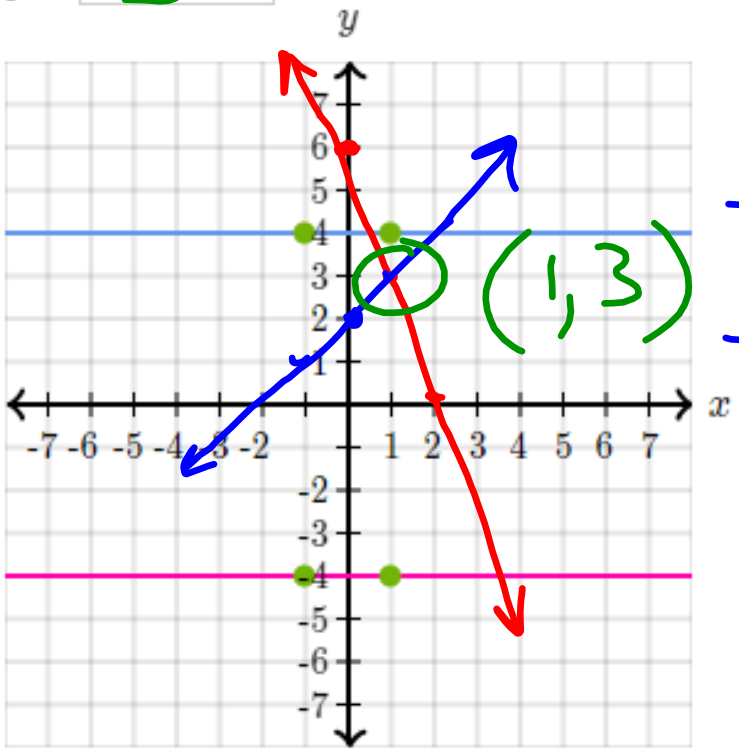
Find the solution to the system of equations.

You can use the interactive graph below to find the solution.

$$\begin{cases} 21x + 7y = 42 \\ -5x + 5y = 10 \end{cases}$$

$x =$ 1

$y =$ 3



$21x + 7y = 42$

$-21x \quad -21x$

$\frac{7y}{7} = \frac{-21x + 42}{7}$

$y = -3x + 6$

$-5x + 5y = 10$

$+5x \quad +5x$

$\frac{5y}{5} = \frac{5x + 10}{5}$

$y = x + 2$

Find the solution to the system of equations.

You can use the interactive graph below to find the solution.

$$\begin{cases} y = -7x + 3 \\ y = -x - 3 \end{cases}$$

$x =$ 1

$y =$ -4