

## Bell Ringer

Solve.  $2(x - 3) - 5x = 9$

# Solving Linear Equations Graphically and Algebraically

## Steps to solve graphically

- 1) Write the equation into  $ax + b = 0$  form (hint: set equation = 0)
- 2) Substitute  $y$  for the 0 and graph using slope-intercept form  
(Notice: the "a" is the slope)
- 3) The solution for "x" graphically is the x-intercept

Solve the equation graphically, then check algebraically.

$$1) \quad 5x + 2 = 7$$

$$\quad \quad -7 \quad -7$$

$$5x - 5 = 0$$

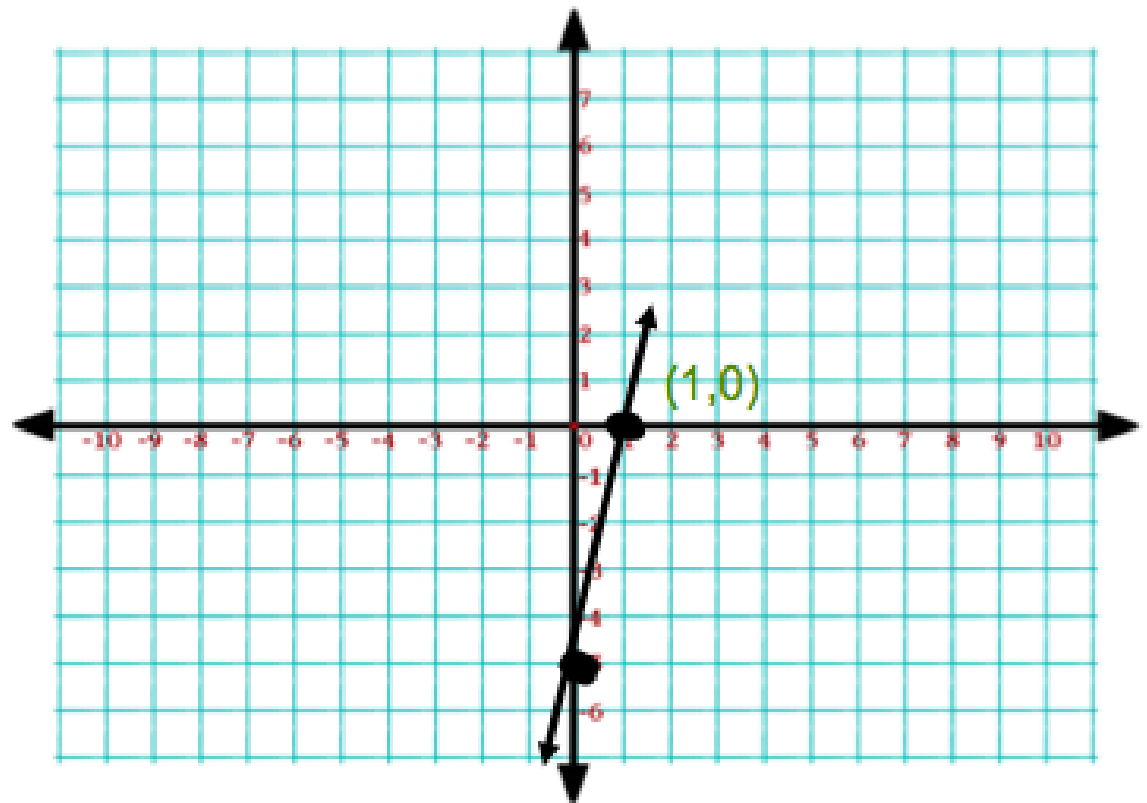
$$5x - 5 = y$$



$$5x + 2 = 7$$

$$5x = 5$$

$$x = 1$$



Solve the equation graphically, then check algebraically.

$$2) \quad \begin{array}{r} 3 - 3x = 9 \\ -9 \quad -9 \end{array}$$

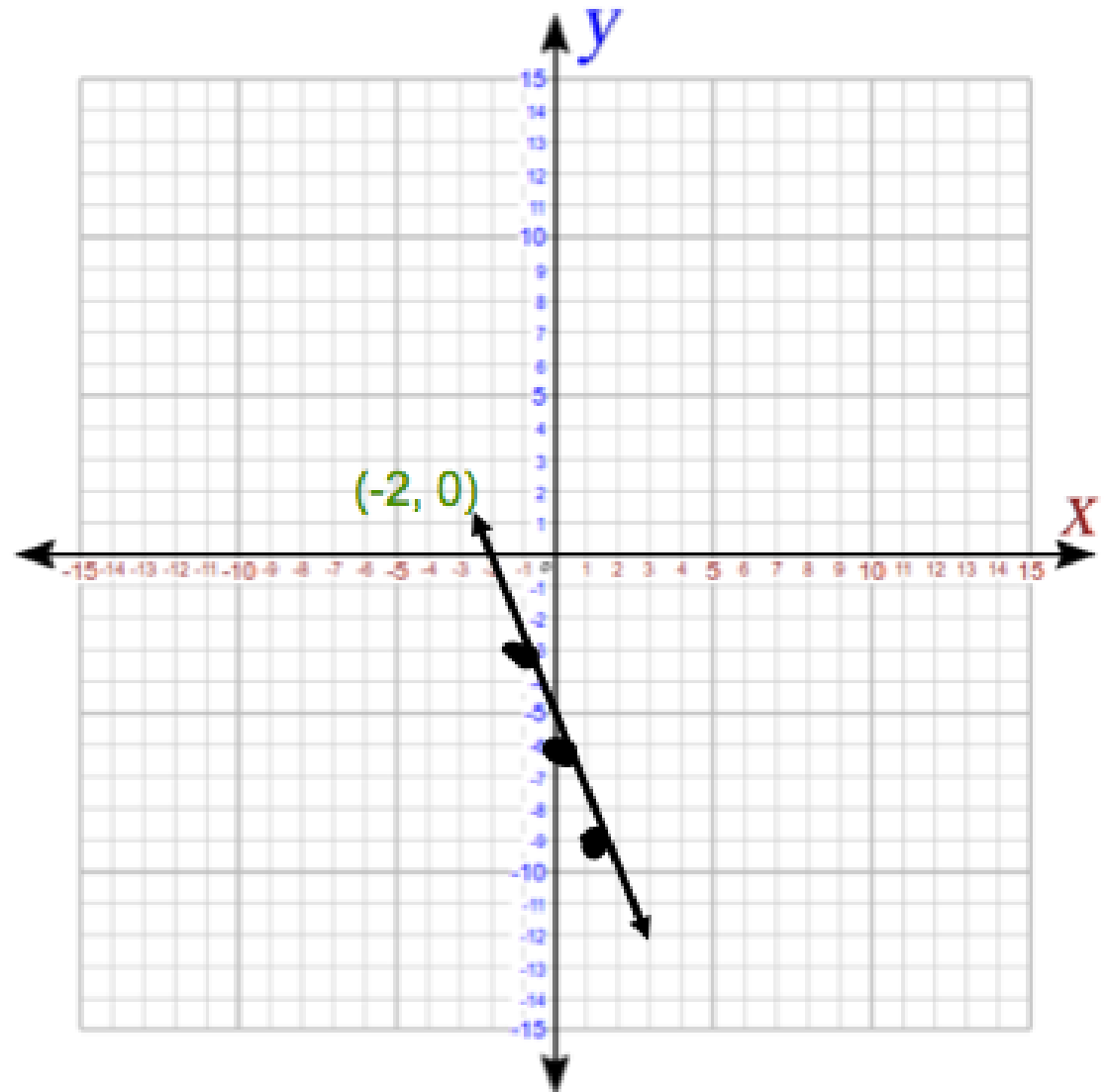
$$-6 - 3x = 0$$

$$y = -6 - 3x$$

$$\checkmark \quad \begin{array}{r} 3 - 3x = 9 \\ -3 \quad -3 \end{array}$$

$$-3x = 6$$

$$x = -2$$



Solve the equation graphically, then check algebraically.

$$3) \frac{5}{2}x - 1 = \frac{9}{2}x$$

$$-\frac{9}{2}x \quad -\frac{9}{2}x$$

$$-\frac{4}{2}x - 1 = 0$$

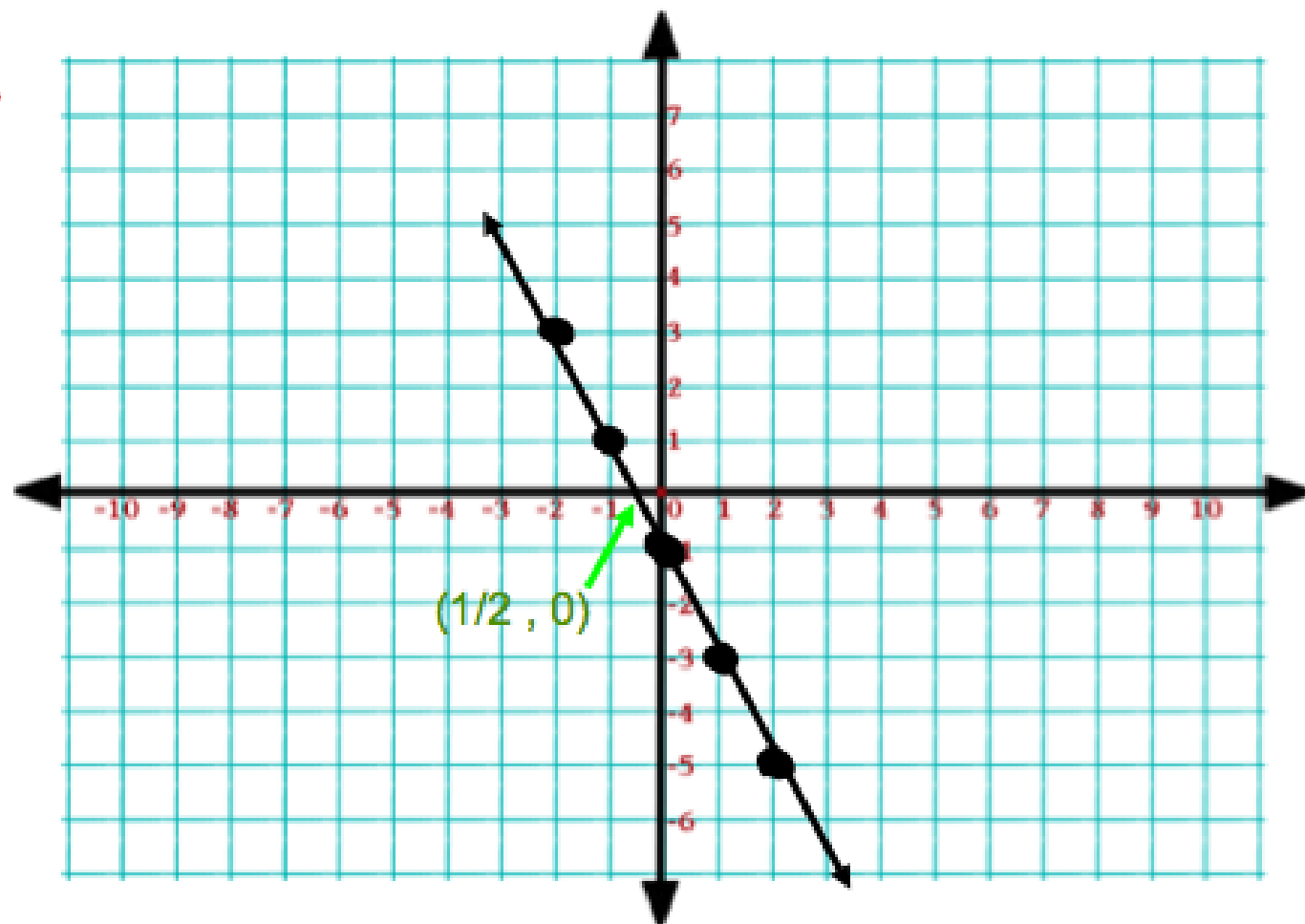
$$-2x - 1 = y$$

✓

$$\frac{2}{2}x - 1 = 0$$

$$\frac{1}{2} = \frac{1}{2}x$$

$$\frac{1}{2} = x$$



Solve the equation graphically, then check algebraically.

$$4) \quad 6 - \frac{1}{4}x = \frac{3}{4}x - 6$$

