

Name: ANSWERS

Period: _____

5.1 Solving Systems of Linear Equations (Graphing)

- 1) What does it mean to solve a system of linear equations?

It means that you find the value of x and y that will fit into both equations at the same time.

- 2) You graph a system of linear equations, and the solution appears to be $(3, 4)$. How can you verify that the solution $(3, 4)$ is correct?

Plug in the coordinates $(3, 4)$ into both equations to see if they will work in both.

Show whether the given ordered pair is a solution of the system.

- 3) $(5, 3)$

$$\begin{aligned} \checkmark 2x - y &= 7 & 2(5) - 3 &= 7 \\ \times x + y &= 2 & 10 - 3 &= 7 \\ & & \underline{\quad\quad\quad} & \\ & & 5 + 3 &= 2 \times \end{aligned}$$

NO

- 4) $(-1, 4)$

$$\begin{aligned} \checkmark 4x + 3y &= 8 & 4(-1) + 3(4) &= 8 \\ \times 3x + y &= 0 & -4 + 12 &= 8 \checkmark \\ & & \underline{\quad\quad\quad} & \\ & & 3(-1) + 4 &= 0 \\ & & -3 + 4 &= 0 \times \end{aligned}$$

NO

- 5) $(2, -2)$

$$\begin{aligned} \checkmark 9x &= 10 - 4y & 9(2) &= 10 - 4(-2) \\ & & 18 &= 10 + 8 \checkmark \\ & & \underline{\quad\quad\quad} & \\ & & -2 &= 3(2) - 8 \\ & & -2 &= 6 - 8 \checkmark \end{aligned}$$

Yes

Match the system of linear equations with the corresponding graph. Use the graph to estimate the solution. Check your solution.

- 6) $y = 2.5x + 1$

$$y = x$$

B $(-\frac{1}{2}, -\frac{1}{2})$

- 7) $y = 2x - 3$

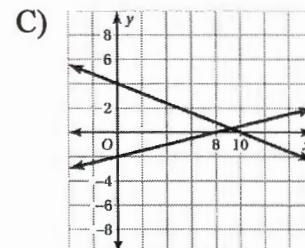
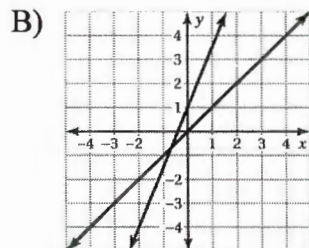
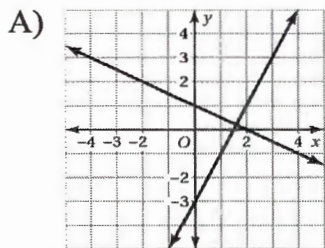
$$y = -\frac{1}{2}x + 1$$

A $(1.5, .25)$

- 5) $y = \frac{1}{4}x - 2$

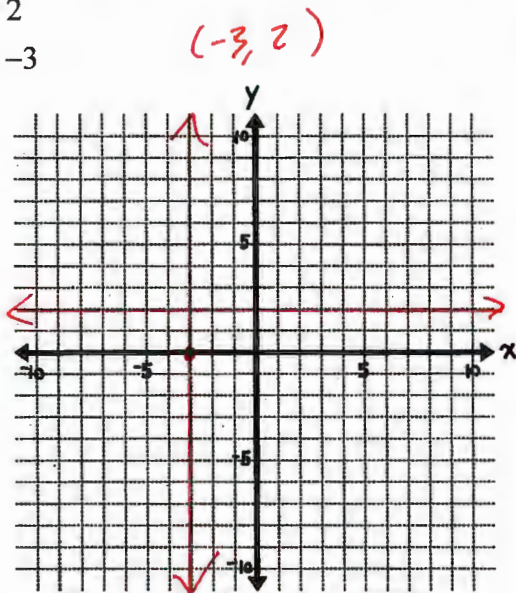
$$y = -\frac{2}{5}x + 4$$

C $(9.5, 0.25)$

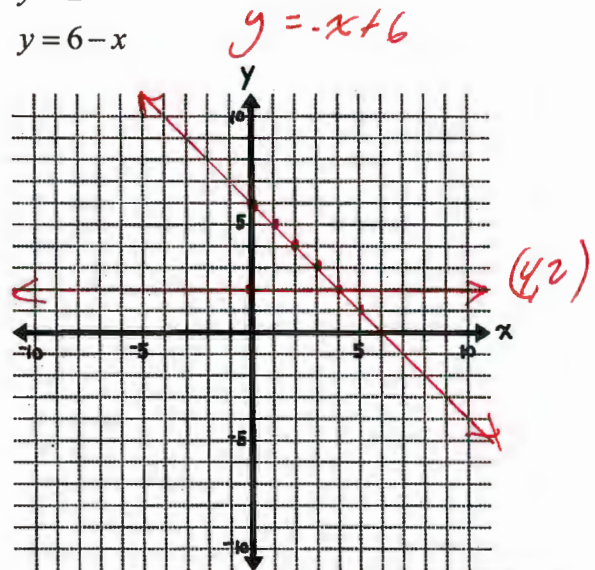


Solve the system of linear equations by graphing.

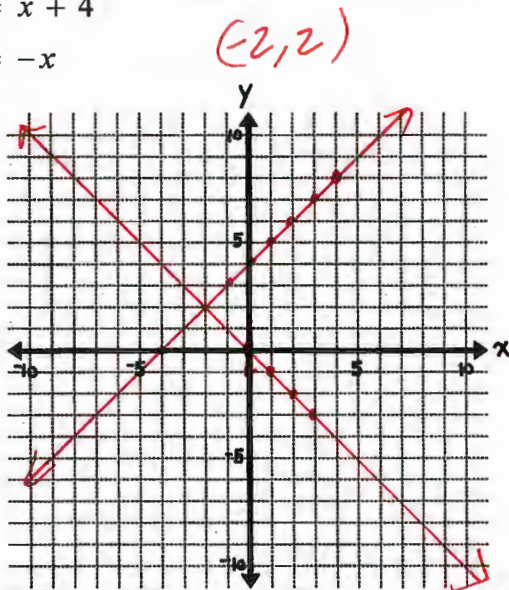
9) $y = 2$
 $x = -3$



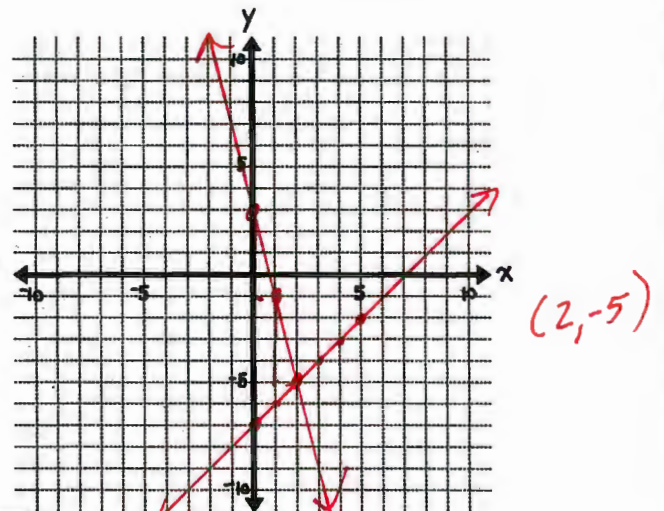
10) $y = 2$
 $y = 6 - x$



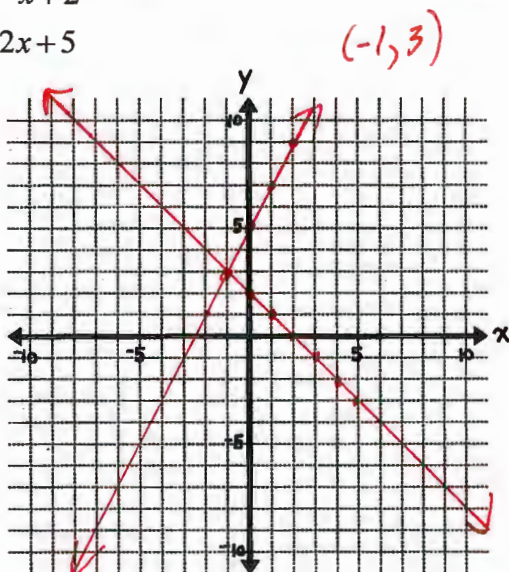
11) $y = x + 4$
 $y = -x$



12) $y = x - 7$
 $y = -4x + 3$



13) $y = -x + 2$
 $y = 2x + 5$



14) $y = 2x - 5$
 $y = x - 3$

