

Assignment 6.1 – System of equations

For examples 1 – 3, decide whether the given ordered pair is a solution to the system of equations.

1.
$$\begin{cases} y = 2x - 6 \\ x + y = 8 \end{cases}$$

 $(4, 2)$

2.
$$\begin{cases} 3x + 5y = 18 \\ y = 7x - 4 \end{cases}$$

 $(1, 3)$

3.
$$\begin{cases} -5x + y = 12 \\ y = -x \end{cases}$$

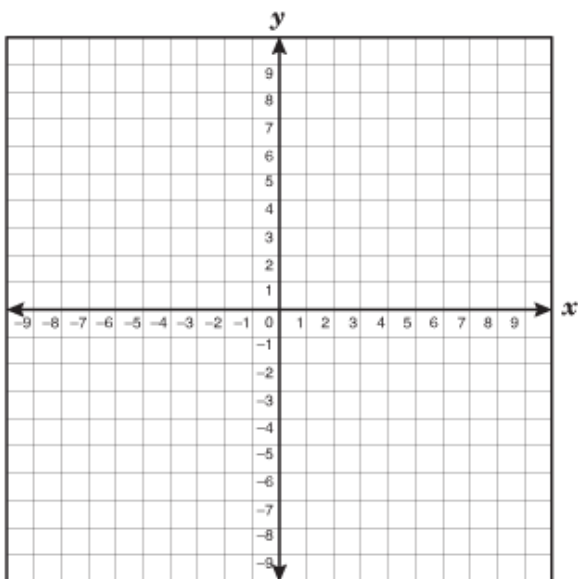
 $(-2, 2)$

For examples 4 – 9, solve each system by graphing. If the system does not have exactly one solution, state whether it has no solution or infinitely many solutions.

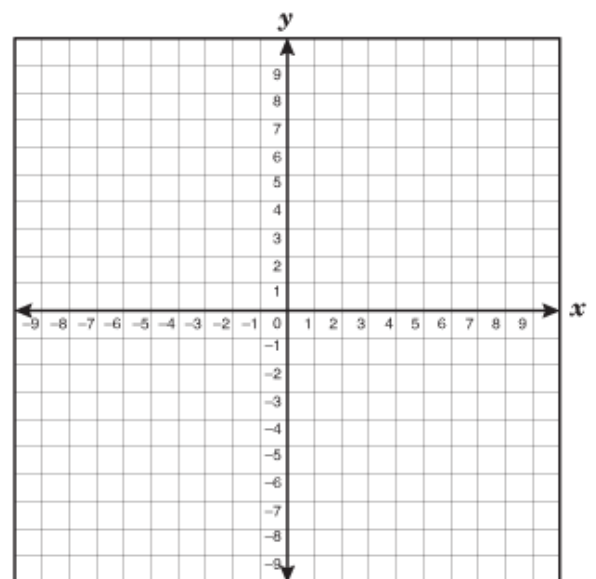
4.
$$\begin{cases} y = \frac{1}{2}x + 3 \\ y = -x + 6 \end{cases}$$

5.
$$\begin{cases} y = 2x - 5 \\ y = 3 - \frac{2}{3}x \end{cases}$$

Solution:

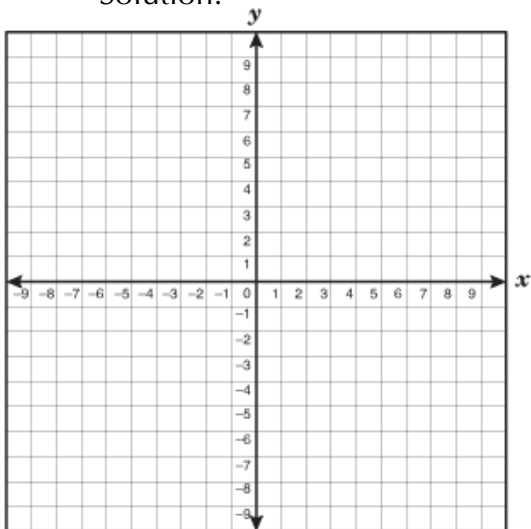


Solution:



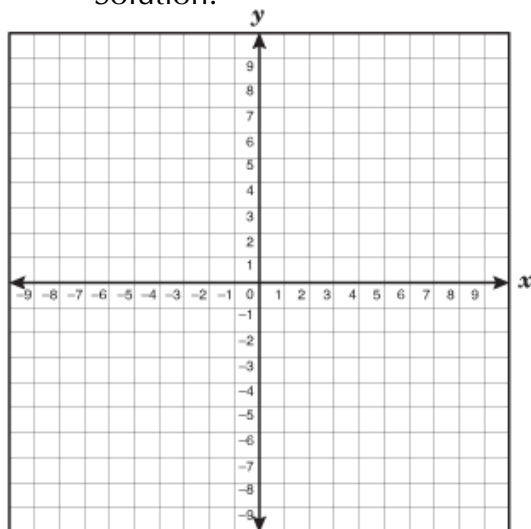
6.
$$\begin{cases} y = 3(x + 1) - 1 \\ y = 2 + 3x \end{cases}$$

Solution:



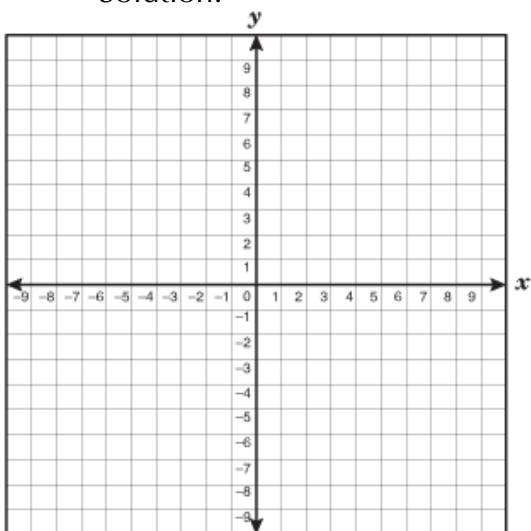
7.
$$\begin{cases} y = 2x \\ y = -\frac{1}{2}x - 5 \end{cases}$$

Solution:



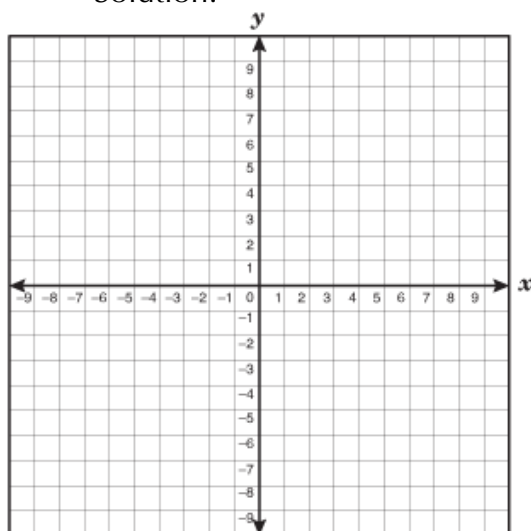
8.
$$\begin{cases} 2y = x + 4 \\ y = \frac{1}{2}x + 4 \end{cases}$$

Solution:



9.
$$\begin{cases} 4x + 3y = 9 \\ y = \frac{1}{3}x + 3 \end{cases}$$

Solution:



Refresh your memory

Find the equation between the two points. Write in point-slope or slope-intercept form.

10. (4, 6) and (-3, 4)

11. (-2, -5) and (8, -7)