

6.1.D3 - SOLVING LINEAR SYSTEMS

Solve each system of equations by substitution. Write your solution as an ordered pair (x, y) . Refer to the 6.1 example "Solving Systems of Linear Equations Using the Substitution Method" in the Chapter 6 Summary.

1.
$$\begin{aligned}x + y &= 8 \\x &= 5\end{aligned}$$

2.
$$\begin{aligned}x &= 2y + 6 \\y &= -3x + 4\end{aligned}$$

3.
$$\begin{aligned}3x - 4y &= -8 \\y &= 2x\end{aligned}$$

4.
$$\begin{aligned}y &= 3x + 10 \\2x - 3y &= -16\end{aligned}$$

5.
$$\begin{aligned}x &= 7 - 2y \\2x + y &= 5\end{aligned}$$

6.
$$\begin{aligned}3x + y &= 2 \\4x + y &= 20\end{aligned}$$

7.
$$\begin{aligned}y - 4x &= 3 \\2x - 3y &= 21\end{aligned}$$

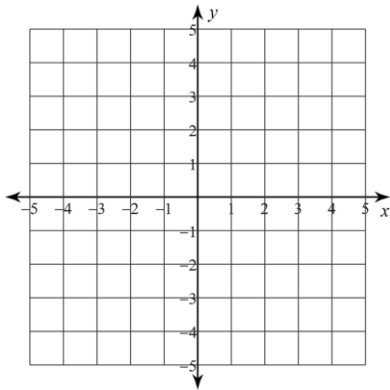
8.
$$\begin{aligned}x + 2y &= -1 \\4x - 4y &= 20\end{aligned}$$

The problem situation can be represented by a system of linear equations. Solve the system using substitution. Refer to the 6.1 example “Solving Systems of Linear Equations Using the Substitution Method” in the Chapter 6 Summary.

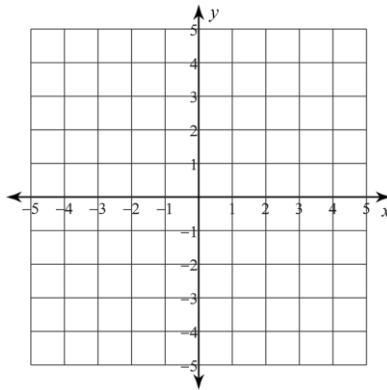
9. Bowl-o-Rama charges \$2.50 per game plus \$2 for shoe rental, and Bowling Pinz charges \$2 per game plus \$4 for shoe rental. Let x = the number of games played.
- Write an equation that represents the total cost at Bowl-o-Rama: $y =$ _____
 - Write an equation that represents the total cost at Bowling Pinz: $y =$ _____
 - Solve the system of equations.
- d. For how many games will the cost to bowl be the same at both places? What is that cost?

Solve the system of linear equations graphically. Write your solution as an ordered pair (x, y) . Refer to the 6.1 example “Predicting the Solution of a System Using Graphing” in the Chapter 6 Summary.

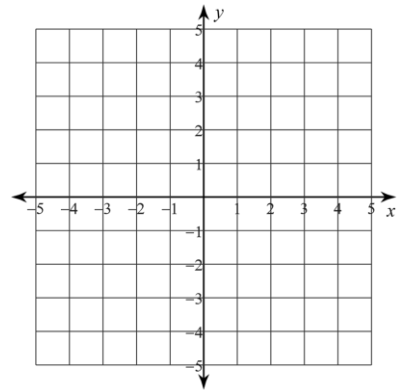
10. $y = x - 2$
 $y = -2x + 1$



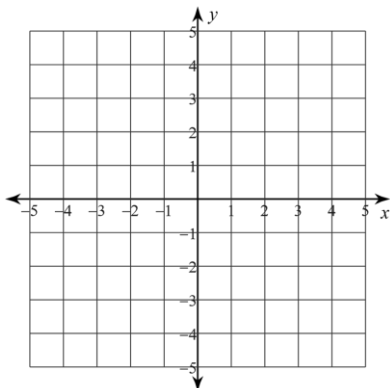
11. $y = 2x - 3$
 $y = -5x + 4$



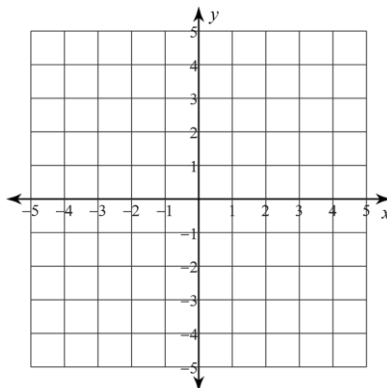
12. $y = -3x + 4$
 $3x + y = -3$



13. $y = 2x + 3$
 $y = -\frac{1}{3}x - 4$



14. $2x - y = 4$
 $y = \frac{1}{4}x + 3$



15. $y = x + 4$
 $y = -\frac{1}{2}x + 1$

