

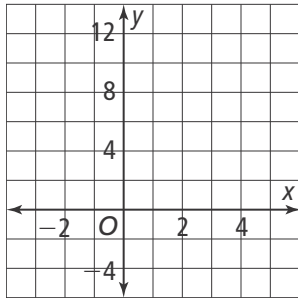


9-7 Additional Practice

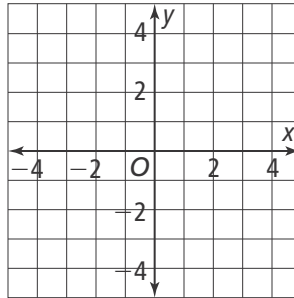
Solving Systems of Linear and Quadratic Equations

Solve each system of equations by graphing.

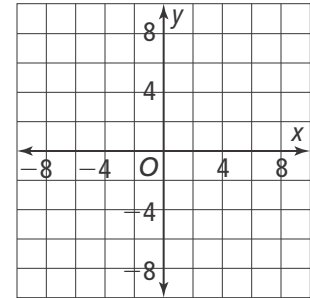
1. $y = x^2 - 3x$
 $y = x + 5$



2. $y = x^2$
 $y = -2x$



3. $y = x^2 + 6x + 1$
 $y = x - 3$



Solve each system of equations using elimination.

4. $y = x^2$
 $y = x + 2$

5. $y = x^2 - 4$
 $y = -x - 2$

6. $y = x^2 - 2x + 2$
 $y = 2x - 2$

Solve each system of equations using substitution.

7. $y = x^2 + x - 60$
 $y = 2x - 4$

8. $y = x^2 - 3x + 7$
 $y = 4x - 3$

9. $y = x^2 - 2x - 5$
 $y = x - 5$

10. Suppose $y = x^2 - 2x - 3$. What is a linear equation that intersects the graph of $y = x^2 - 2x - 3$ in exactly two places? Name the two points of intersection.

11. The population of two different villages is modeled by the equations shown. Suppose y represents the population and x represents the number of years since 1980. What year(s) were the populations of both villages the same? What was the population of both villages in the year(s) they were the same?

Montville: $y = x^2 - 30x + 540$

Havertown: $y = 20x + 15$