

LESSON
2-3

Practice A

Solving Quadratic Equations by Graphing and Factoring

Tell whether each statement is true or false.

1. Quadratic functions have only one zero. _____
2. A zero of a function is the value of x that makes $f(x) = 0$. _____
3. The points $(0, 2)$ and $(0, 5)$ could be the zeros of a given quadratic function. _____

Find the zeros of $f(x) = x^2 - x - 6$ by using a table and a graph.

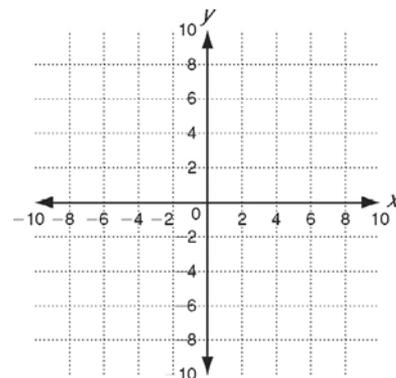
4. In what direction does the parabola open?

x	-2	-1	0	2	4
$f(x)$					

5. Find the y -intercept.

6. Find the vertex.

7. Plot the vertex and the y -intercept. Complete the table and use the values to draw the graph.



8. What are the zeros of the function?

Find the zeros of each function by factoring.

9. $f(x) = x^2 - 3x - 10$
 - a. Set the function equal to 0. $x^2 - 3x - 10 = \underline{\hspace{2cm}}$
 - b. Factor. $(x + \underline{\hspace{1cm}})(x - \underline{\hspace{1cm}}) = \underline{\hspace{2cm}}$
 - c. Set each factor equal to 0. $(x + \underline{\hspace{1cm}}) = \underline{\hspace{1cm}}$ or $(x - \underline{\hspace{1cm}}) = \underline{\hspace{1cm}}$
 - d. Solve each equation for x . $x = \underline{\hspace{1cm}}$ or $x = \underline{\hspace{1cm}}$

10. $f(x) = x^2 - 1$ _____

Solve.

11. A quadratic function has zeros equal to 1 and 2.
 - a. What is the factored form of the function? _____
 - b. Multiply the factors to give the quadratic function. _____