Solving Quadratic Equations Using Tables

Name:

Date:

Vocabulary Review:
In your own words, define each of the following vocabulary terms.

- Equation

- Function

- x-Intercept

- Parabola

- Quadratic Equation

- Zero

Apply New Learning:

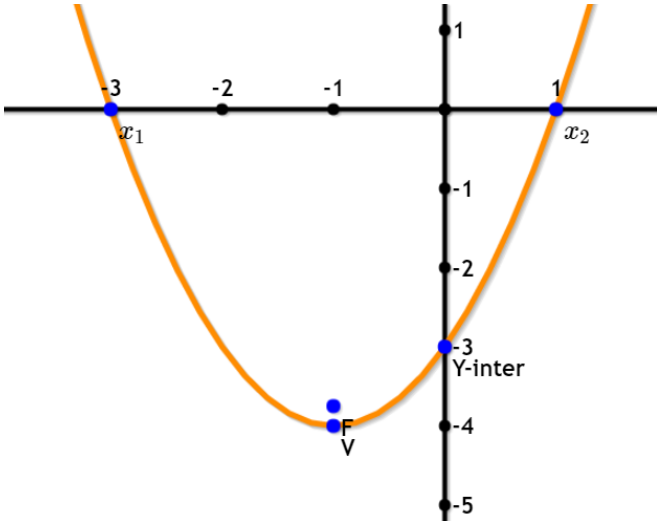
1. Make a table of values for the function $f(x) = 2x^2 + 3x - 9$. Use data from the table to answer questions #2–4.

x	*f(x)*
-5	
-3	
-1	
0	
1	
3	
5	

2. What are the roots, or solutions, of the quadratic function?

3. What is the zero of the quadratic function?

Use the graph below to answer questions #4 and 5.



4. What are the roots, or solutions, of the quadratic function?

5. What is the zero of the quadratic function?

6. If a table of values does not contain function values equal to 0, how can you use the table to estimate the solutions to a quadratic equation?

7. Consider the function $y = x^2 - 7$ and its related equation $x^2 - 7 = 0$. The table below displays the relationship from the equation. Estimate the zeros of the quadratic function.

x	$y = x^2 + 7$
-5	18
-3	2
-1	-6
0	-7
1	-6
3	2
5	18