

Worksheet #2 Lesson 2.3

Use the zeros to write each function rule.

1) $x = -1$ and $x = 3$

2) $x = 10$ and $x = 5$

3) $x = 2$ and $x = -3$

4) $x = -7$ and $x = -7$

5) $x = 0$ and $x = 9$

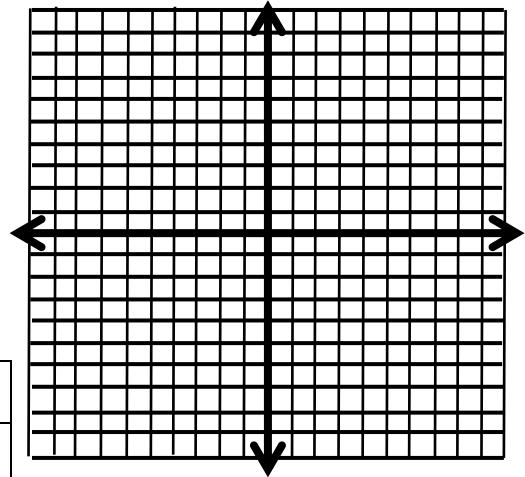
6) $x = 11$ and $x = -12$

Find each zero by graphing each function.

7) $y = -x^2 - 8x - 12$ $a = \underline{\hspace{1cm}}$ $b = \underline{\hspace{1cm}}$ $c = \underline{\hspace{1cm}}$

Vertex:

Zeros:

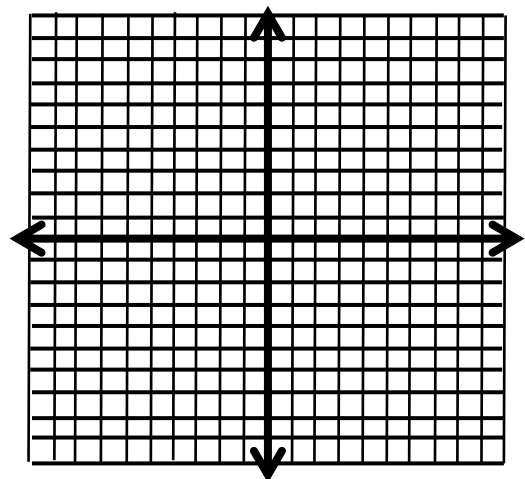


x							
y							

8) $y = 2x^2 - 4x$ $a = \underline{\hspace{1cm}}$ $b = \underline{\hspace{1cm}}$ $c = \underline{\hspace{1cm}}$

Vertex:

Zeros:



x					
y					

Solve each word problem.

9) The height h of an arrow in feet is modeled by $h(t) = -16t^2 + 63t + 4$, where t is the time in seconds since the arrow was shot upward.

a. What is the maximum height of the arrow?

b. How long was the arrow in the air?

10) A bald eagle snatches a fish from a lake and flies to an altitude of 256 feet. The fish manages to squirm free and falls back down into the lake. Its height h in feet can be modeled by $h(t) = -16t^2 + 256$, where t is the time in seconds.

a. How many seconds will the fish fall before hitting the water?

b. How many feet from the lake is the fish after 1.5 seconds into its fall?