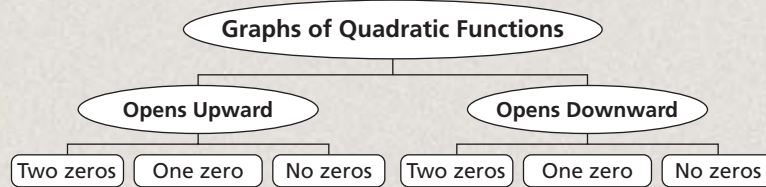


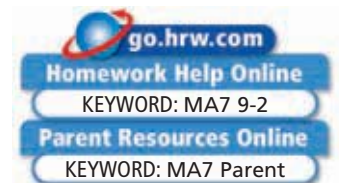
THINK AND DISCUSS

- How do you find the zeros of a function from its graph?
- Describe how to find the axis of symmetry of a quadratic function if its graph does not cross the x -axis
- GET ORGANIZED** Copy and complete the graphic organizer. In each box, sketch a graph that fits the given description.



9-2

Exercises



GUIDED PRACTICE

Vocabulary Apply the vocabulary from this lesson to answer each question.

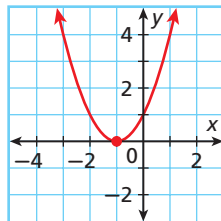
- Why is the *zero of a function* the same as an x -intercept of a function?
- Where is the *axis of symmetry* of a parabola located?

SEE EXAMPLE 1

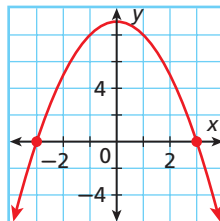
p. 619

Find the zeros of each quadratic function from its graph. Check your answer.

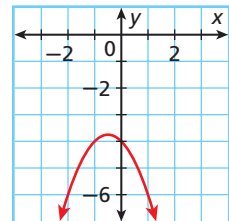
3. $y = x^2 + 2x + 1$



4. $y = 9 - x^2$



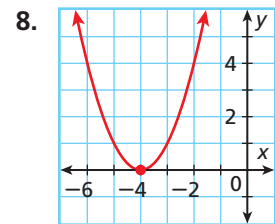
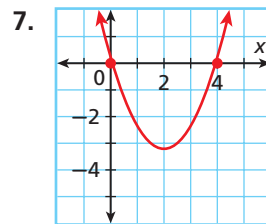
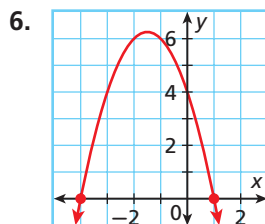
5. $y = -x^2 - x - 4$



SEE EXAMPLE 2

p. 620

Find the axis of symmetry of each parabola.



SEE EXAMPLE 3

p. 621

For each quadratic function, find the axis of symmetry of its graph.

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

10. $y = 3x^2 - 18x + 1$

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

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