10 CHAPTER REVIEW

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- Multi-Language Glossary
- Vocabulary practice

REVIEW KEY VOCABULARY

- quadratic function, *p. 628*
- standard form of a quadratic function, *p. 628*
- parabola, *p. 628*
- parent quadratic function, *p. 628*
- vertex of a parabola, *p. 628*
- axis of symmetry, *p. 628*
- minimum value, *p. 636*
- maximum value, *p. 636*
- intercept form of a quadratic function, *p. 641*
- quadratic equation, *p. 643*
- standard form of a quadratic equation, *p. 643*
- completing the square, *p. 663*
- vertex form of a quadratic function, *p. 669*
- quadratic formula, *p. 671*
- discriminant, *p. 678*

VOCABULARY EXERCISES

1. Copy and complete: The line that passes through the vertex and divides a parabola into two symmetric parts is called the ___?___.

Tell whether the function has a *minimum value* or a *maximum value*.

2. $f(x) = 5x^2 - 4x$ **3.** $f(x) = -x^2 + 6x + 2$ **4.** $f(x) = 0.3x^2 - 7.7x + 1.8$

REVIEW EXAMPLES AND EXERCISES

Use the review examples and exercises below to check your understanding of the concepts you have learned in each lesson of Chapter 10.

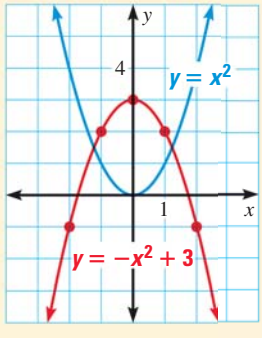
10.1 Graph $y = ax^2 + c$ *pp. 628–634*

EXAMPLE

Graph $y = -x^2 + 3$. Compare the graph with the graph of $y = x^2$.

Make a table of values for $y = -x^2 + 3$. Then plot the points from the table and draw a smooth curve through the points.

x	−2	−1	0	1	2
y	−1	2	3	2	−1



Both graphs have the same axis of symmetry, $x = 0$. However, the graph of $y = -x^2 + 3$ has a different vertex than the graph of $y = x^2$, and it opens down. This is because the graph of $y = -x^2 + 3$ is a vertical translation (of 3 units up) and a reflection in the x-axis of the graph of $y = x^2$.

EXAMPLES 1, 2, and 4 on pp. 628–630 for Exs. 5–7

EXERCISES

Graph the function. Compare the graph with the graph of $y = x^2$.

5. $y = -4x^2$ **6.** $y = \frac{1}{3}x^2$ **7.** $y = 2x^2 - 1$