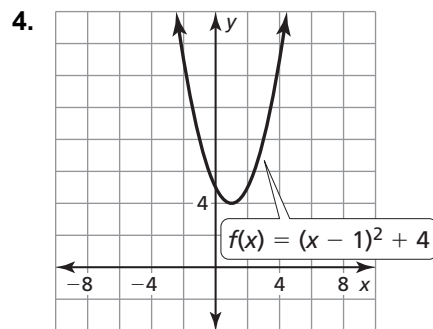
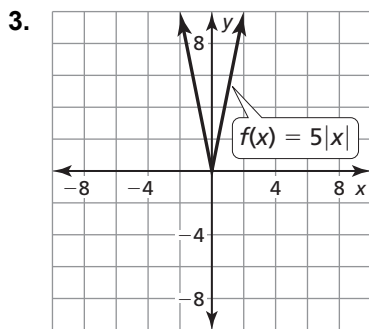
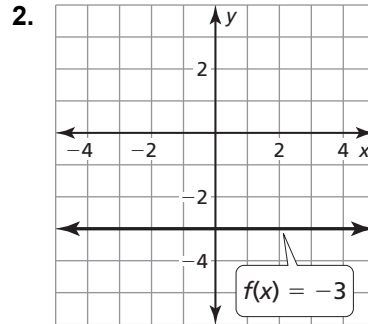
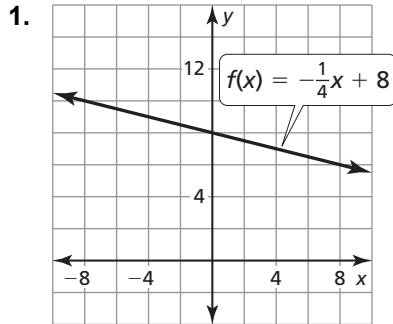


**1.1** Notetaking with Vocabulary (continued)

**Extra Practice**

In Exercises 1–4, identify the function family to which  $f$  belongs. Compare the graph of  $f$  to the graph of its parent function.

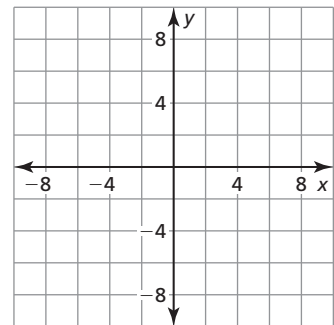
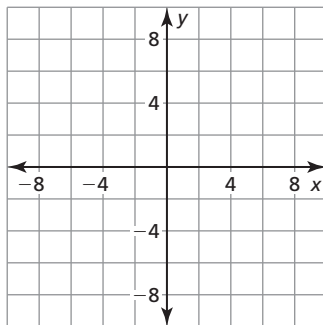
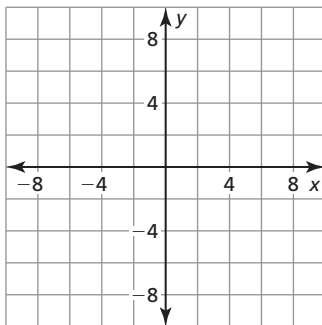


In Exercises 5–10, graph the function and its parent function. Then describe the transformation.

5.  $f(x) = x - 7$

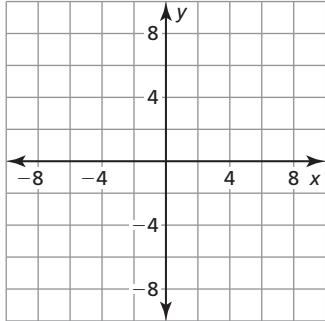
6.  $f(x) = -9$

7.  $f(x) = |x| + 1$

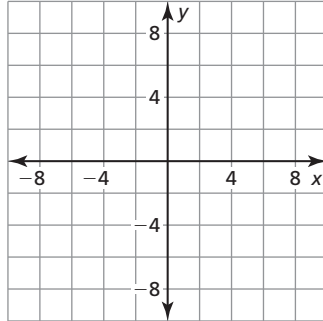


**1.1** Notetaking with Vocabulary (continued)

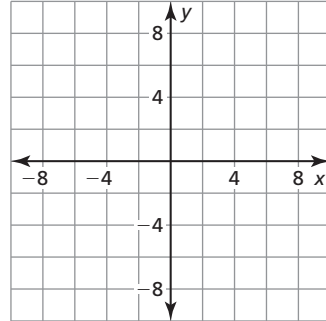
8.  $h(x) = -x^2$



9.  $f(x) = \frac{1}{8}x^2$



10.  $g(x) = 6|x|$



11. Identify the function family of  $f(x) = \frac{1}{3}| -x | + 4$  and describe the domain and range.  
Use a graphing calculator to verify your answer.

12. The table shows the distance a biker rides in his first team relay competition.

<b>Time (hours), <math>x</math></b>	1	2	3	4
<b>Distance (miles), <math>y</math></b>	12	24	36	48

a. What type of function can you use to model the data? Explain.

b. If the biker's teammate rides at the same pace but leaves 1 hour later, what type of transformation does this represent?