

**LESSON**  
**9.1**

**Practice A**

For use with the lesson "Graph  $y = ax^2 + c$ "

Use the quadratic function to complete the table of values.

1.  $y = 5x^2$

<b>x</b>	-2	-1	0	1	2
<b>y</b>	?	?	?	?	?

2.  $y = -4x^2$

<b>x</b>	-2	-1	0	1	2
<b>y</b>	?	?	?	?	?

3.  $y = x^2 + 6$

<b>x</b>	-2	-1	0	1	2
<b>y</b>	?	?	?	?	?

4.  $y = x^2 - 8$

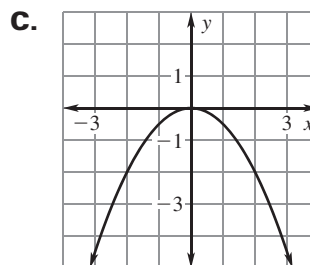
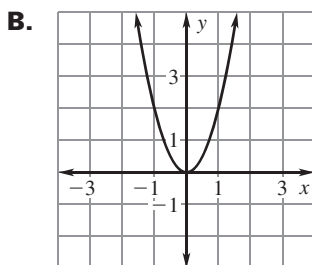
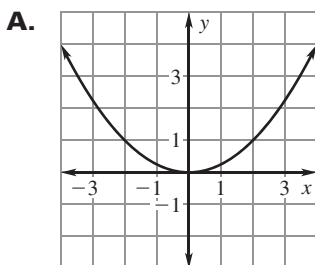
<b>x</b>	-2	-1	0	1	2
<b>y</b>	?	?	?	?	?

Match the function with its graph.

5.  $y = -\frac{1}{2}x^2$

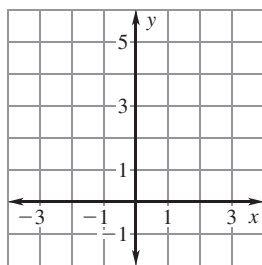
6.  $y = 2x^2$

7.  $y = \frac{1}{4}x^2$

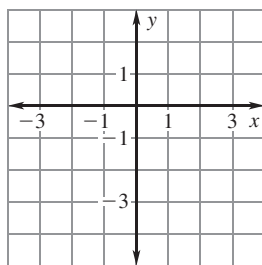


Graph the function and identify its domain and range. Compare the graph with the graph of  $y = x^2$ .

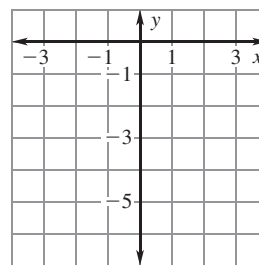
8.  $y = 5x^2$



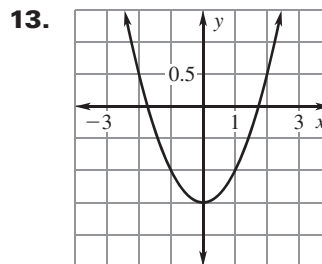
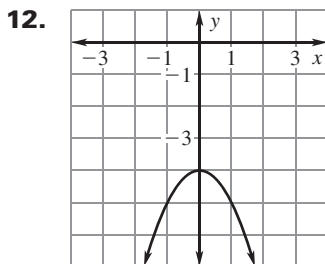
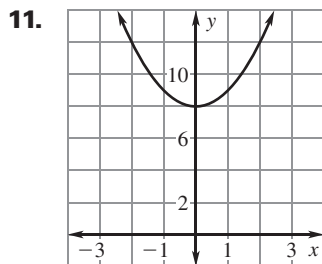
9.  $y = -\frac{1}{3}x^2$



10.  $y = -6x^2$



Identify the vertex and axis of symmetry of the graph.



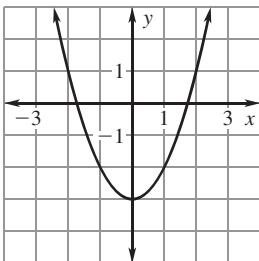
**LESSON**  
**9.1**

**Practice A** *continued*  
For use with the lesson "Graph  $y = ax^2 + c$ "

**Match the function with its graph.**

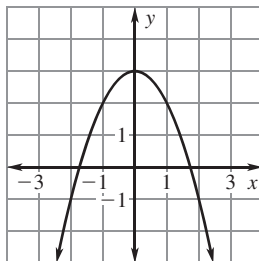
14.  $y = x^2 - 3$

A.



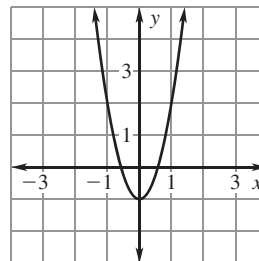
15.  $y = 3x^2 - 1$

B.



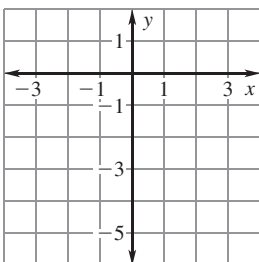
16.  $y = -x^2 + 3$

C.

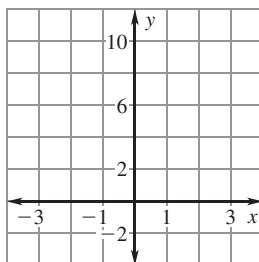


**Graph the function and identify its domain and range. Compare the graph with the graph of  $y = x^2$ .**

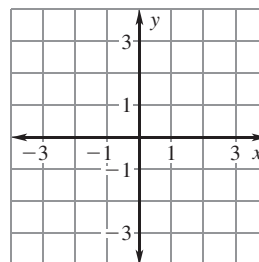
17.  $y = x^2 - 5$



18.  $y = x^2 + 7$



19.  $y = 2x^2 - 3$



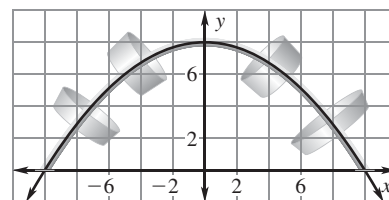
**Complete the statement.**

20. The graph of  $y = x^2 + 5$  can be obtained from the graph of  $y = x^2$  by shifting the graph of  $y = x^2$      ?

21. The graph of  $y = 10x^2$  can be obtained from the graph of  $y = x^2$  by     ? the graph of  $y = x^2$  by a factor of     ?

22. **Pot Rack** A cross section of the pot rack shown can be modeled by the graph of the function  $y = -0.08x^2 + 8$  where  $x$  and  $y$  are measured in inches.

- a. Find the domain of the function in this situation.
- b. Find the range of the function in this situation.



23. **Drawer Handle** A cross section of the drawer handle shown can be modeled by the graph of the function  $y = -\frac{1}{18}x^2 + 2$  where  $x$  and  $y$  are measured in centimeters.

- a. Find the domain of the function in this situation.
- b. Find the range of the function in this situation.

