

LESSON
10.1
Practice B
For use with pages 628–634
Use the quadratic function to complete the table of values.

1. $y = 9x^2$

x	-2	-1	0	1	2
y	?	?	?	?	?

2. $y = -5x^2$

x	-2	-1	0	1	2
y	?	?	?	?	?

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

x	-4	-2	0	2	4
y	?	?	?	?	?

4. $y = -\frac{1}{8}x^2 - 2$

x	-16	-8	0	8	16
y	?	?	?	?	?

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

x	-2	-1	0	1	2
y	?	?	?	?	?

6. $y = 6x^2 - 5$

x	-2	-1	0	1	2
y	?	?	?	?	?

Match the function with its graph.

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

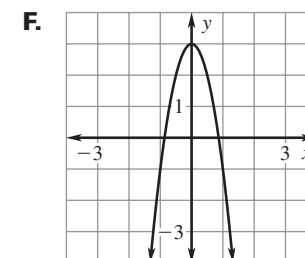
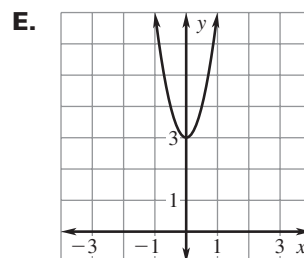
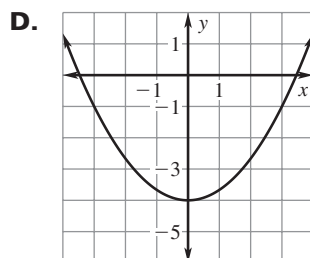
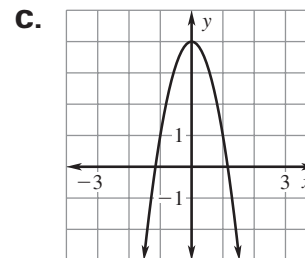
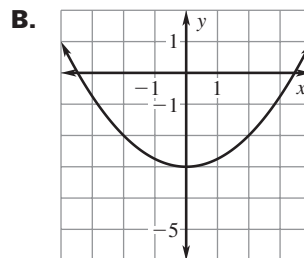
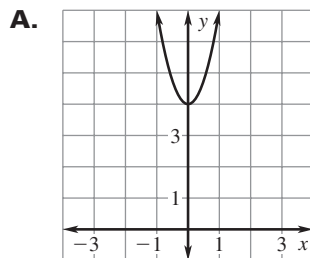
8. $y = 3x^2 + 4$

9. $y = \frac{1}{3}x^2 - 4$

10. $y = \frac{1}{4}x^2 - 3$

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

12. $y = 4x^2 + 3$


Describe how you can use the graph of $y = x^2$ to graph the given function.

13. $y = x^2 - 8$

14. $y = -x^2 + 4$

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

16. $y = -5x^2 + 1$

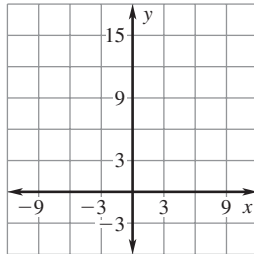
17. $y = \frac{1}{2}x^2 - 2$

18. $y = -\frac{3}{4}x^2 + 5$

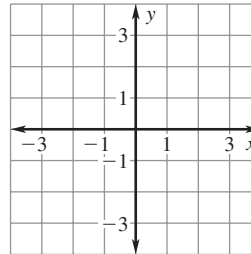
LESSON
10.1**Practice B** *continued*
For use with pages 628–634

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

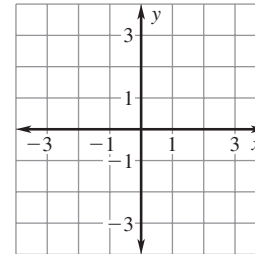
19. $y = x^2 + 9$



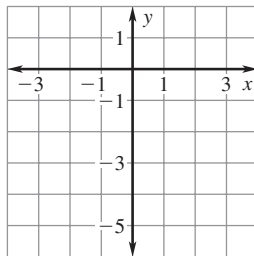
20. $y = -\frac{1}{5}x^2$



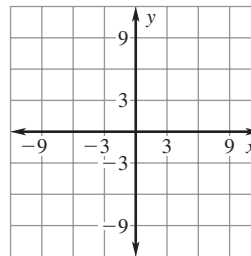
21. $y = -\frac{3}{2}x^2$



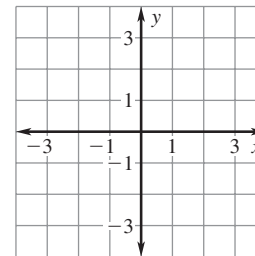
22. $y = x^2 - 3.5$



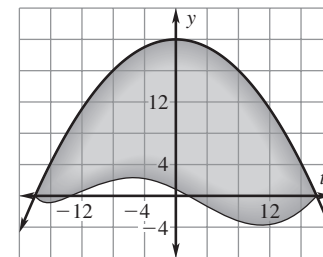
23. $y = 2x^2 - 9$



24. $y = -5x^2 + 2$



- 25. Serving Plate** The top view of a freeform serving plate you made in a ceramics class is shown in the graph. One edge of the plate can be modeled by the graph of the function $y = -\frac{5}{81}x^2 + 20$ 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.
- 26. Roof Shingle** A roof shingle is dropped from a rooftop that is 100 feet above the ground. The height y (in feet) of the dropped roof shingle is given by the function $y = -16t^2 + 100$ where t is the time (in seconds) since the shingle is dropped.
- a.** Graph the function.
b. Identify the domain and range of the function in this situation.
c. Use the graph to estimate the shingle's height at 1 second.
d. Use the graph to estimate when the shingle is at a height of 50 feet.
e. Use the graph to estimate when the shingle is at a height of 0 feet.

