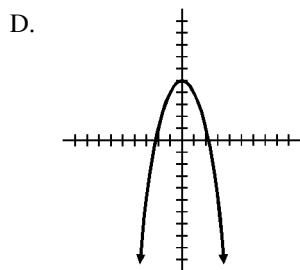
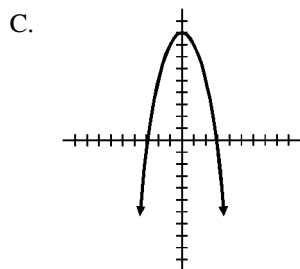
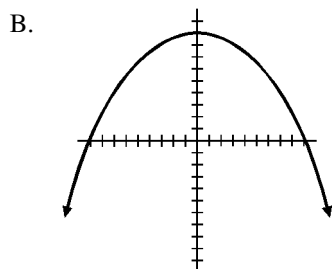
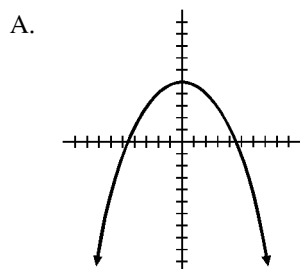
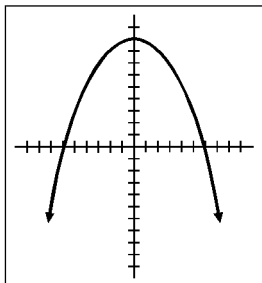


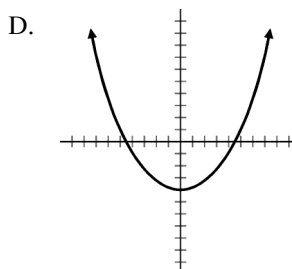
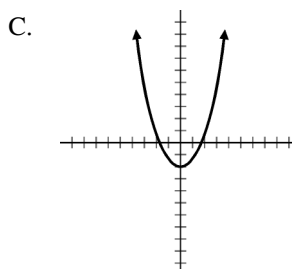
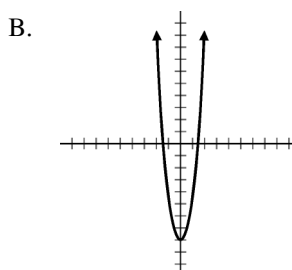
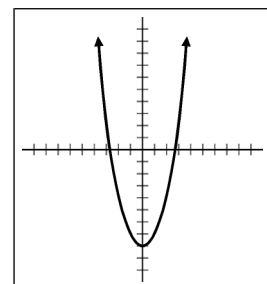
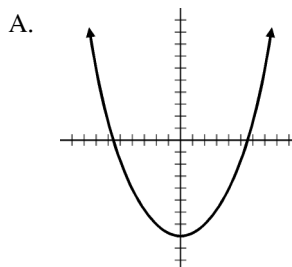
Name: _____

Date: _____

1. The box contains the graph of the equation $y = -\frac{1}{4}x^2 + 9$. What would the graph look like if the equation were changed to $y = -x^2 + 9$?



2. The box contains the graph of the equation $y = x^2 - 8$. What would the graph look like if the equation were changed to $y = \frac{1}{4}x^2 - 8$?



3. Let $f(x) = x^2$ and $g(x)$ be $f(x)$ reflected over the x -axis and translated to the left 7 units. Which table represents this translation?

A.

x	$g(x)$
0	-49
1	-36
2	-25

B.

x	$g(x)$
0	-7
1	-8
2	-11

C.

x	$g(x)$
0	-49
1	-64
2	-81

D.

x	$g(x)$
0	7
1	6
2	3

4. Let $f(x) = x^2$ and $g(x)$ be $f(x)$ reflected over the x -axis and translated to the right 5 units. Which table represents this translation?

A.

x	$g(x)$
0	-25
1	-36
2	-49

B.

x	$g(x)$
0	-25
1	-16
2	-9

C.

x	$g(x)$
0	5
1	6
2	7

D.

x	$g(x)$
0	-5
1	-6
2	-7

5. What happens to the graph of a function if you replace x with $5x$ in its equation?
6. What happens to the graph of a function if you replace x with $\frac{1}{2}x$ in its equation?
7. Describe the effect on the vertex of the parabola $y = x^2 - 3$, if the equation is changed to $y = x^2 + 5$?

8. What will be the effect on the vertex of the parabola $y = 4x^2 + 1$, if the equation is changed to $y = -4x^2 + 1$?
9. The graph of $y = 3 \cdot f(x)$, compared to the graph of $y = f(x)$, is changed by:
10. The graph of $y = \frac{1}{3} \cdot f(x)$, compared to the graph of $y = f(x)$, is changed by:
11. Consider the equation $y = x^2$. What effect will replacing x with $(x - 3)$ have on the graph?
12. Consider the equation $y = |x|$. What effect will replacing x with $x + 7$ have on the graph?
13. If $f(x) = x^3$ is transformed into the graph of $h(x) = x^3 + 4$, which of the following describes the transformation?
14. If $f(x) = x^3$ is transformed into the graph of $h(x) = x^3 - 6$, which of the following describes the transformation?
15. If $f(x) = x^3$ is transformed into the graph of $h(x) = (x - 9)^3$, which of the following describes the transformation?
16. If $f(x) = x^3$ is transformed into the graph of $h(x) = (x + 8)^3$, which of the following describes the transformation?
17. If $f(x) = 2x^3 + 3x^2 - 5$ is transformed into the graph of $h(x) = -2x^3 + 3x^2 - 5$, which of the following describes the transformation?
18. If $f(x) = 4x^3 + 6x^2 - 1$ is transformed into the graph of $h(x) = -4x^3 - 6x^2 + 1$, which of the following describes the transformation?

19. Let $f(x) = (x - 3)^2$ and $g(x) = f(x) + 4$. Sketch $g(x)$ on a graph.

20. Let $f(x) = (x + 3)^2$ and $g(x) = f(x) - 7$. Sketch $g(x)$ on a graph.