

Algebra 1
Section 8.1 Worksheet #1

Name _____

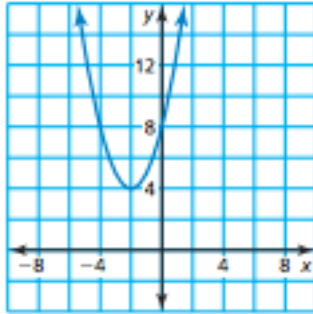
1. *Vocabulary* What is the U-shaped graph of a quadratic function called?

2. *Writing* When does the graph of a quadratic function open up? open down?

In 3 - 6, identify the following characteristics:

3.

Vertex:



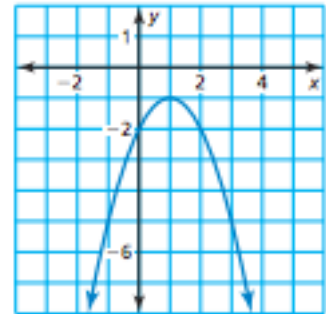
AOS:

Domain:

Range:

4.

Vertex:



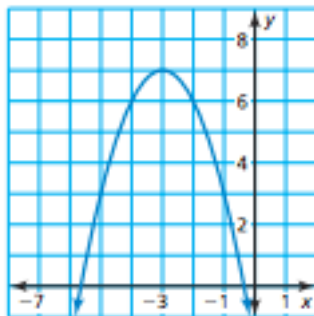
AOS:

Domain:

Range:

5.

Vertex:



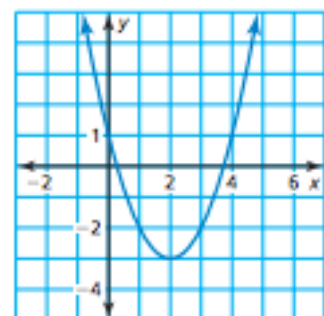
AOS:

Domain:

Range:

6.

Vertex:

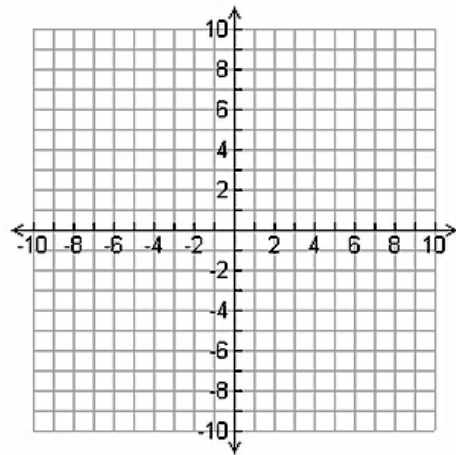


AOS:

Domain:

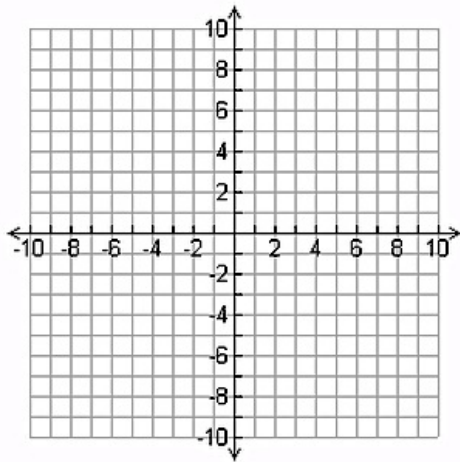
Range:

7. Graph $f(x) = x^2$ by making a table of values.



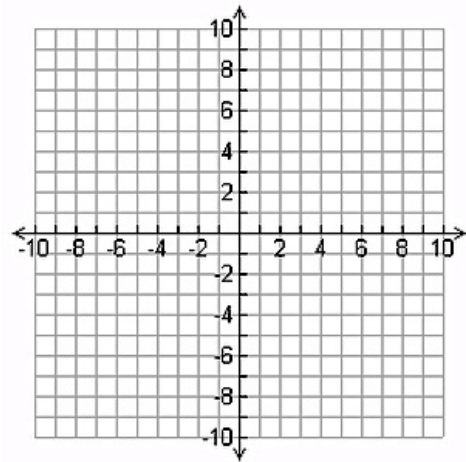
Graph the function by making a table of values. Compare the graph to the graph of $f(x) = x^2$.

8. $f(x) = 3x^2$



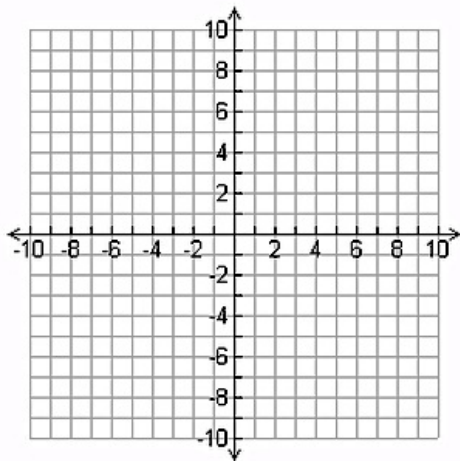
Comparison: _____

9. $f(x) = -2x^2$



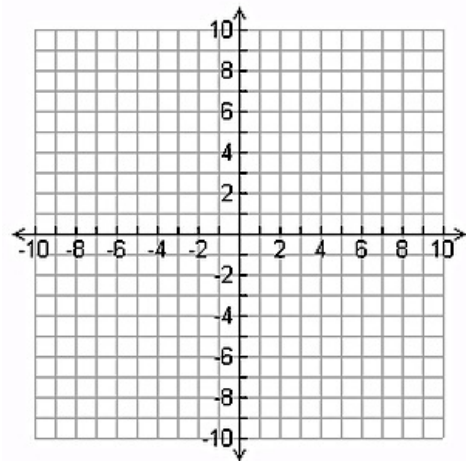
Comparison: _____

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



Comparison: _____

11. $f(x) = -\frac{1}{3}x^2$

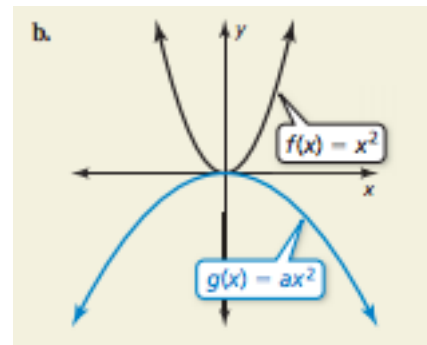
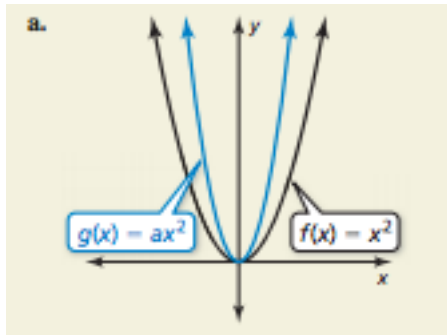


Comparison: _____

Compare the graph of each function to the graph of $f(x) = x^2$.

12. $g(x) = 6x^2$	13. $f(x) = -2x^2$
14. $f(x) = \frac{1}{4}x^2$	15. $f(x) = 0.75x^2$
16. $b(x) = 2.5x^2$	17. $f(x) = -0.2x^2$

18. In each graph, describe the possible values of a .



Evaluate the expression when $n = 3$ and $x = -2$.

19. $n^2 + 5$	20. $3x^2 - 9$	21. $-4n^2 + 11$	22. $n + 2x^2$
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