

<p>1. If the vertex of a parabola is $(0,3)$, what is the axis of symmetry?</p>	<p>2. If the vertex of a parabola is $(0,-4)$, what is the axis of symmetry?</p>
<p>Compare the graphs of each group of functions and list them in order from widest to narrowest.</p>	
<p>3. $y = -3x^2, y = -5x^2, y = -x^2$</p>	<p>4. $y = 4x^2, y = -2x^2, y = -6x^2$</p>
<p>5. The function $f(x) = x^2$ is graphed to the right.</p> <p>a. Make a table of values and graph the function $g(x) = \frac{3}{2}x^2$.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div data-bbox="284 1249 885 1575" style="width: 45%;"> <p>b. How does the shape of $g(x)$ compare to $f(x)$?</p> <p>c. How do the average rates of change compare for each function over the interval $-3 \leq x \leq -2$?</p> </div> <div data-bbox="950 735 1380 1354" style="width: 45%; text-align: center;"> </div> </div>	

Algebra
8-1 Practice

A#2

Place the functions in the appropriate set below. Write the entire function, not the function number. Functions may be used more than once.

2. $y = 0.8x^2$

3. $y = -x^2$

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

5. $y = -8x^2$

6. $y = 4x^2$

7. $y = 9x^2$

8. $y = 11x^2$

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

10. $y = 2.5x^2$

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

12. $y = 3x^2 + 18x + 29$

13. $y = 2.5x^2$

Set 1: Wider than $f(x) = 0.95x^2$	Set 2: Narrower than $g(x) = -4x^2$
Set 3: Opens downward	Set 4: Increases over the interval $x < 0$
Set 5: Opens upward	Set 6: Decreases over the interval $x < 0$