

**Algebra 1**  
**Section 8.1 Notes**

Name \_\_\_\_\_

$$f(x) = ax^2$$

- if  $a$  is negative: reflect over  $x$ -axis
  - if  $|a| > 1$  : vertical stretch of  $a$
  - if  $0 < |a| < 1$  : vertical shrink of  $a$

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

1. $f(x) = 3x^2$	2. $f(x) = \frac{1}{6}x^2$
3. $f(x) = -5x^2$	4. $f(x) = 9x^2$
5. $f(x) = \frac{3}{2}x^2$	6. $f(x) = -8x^2$
7. $f(x) = -\frac{5}{6}x^2$	8. $f(x) = 11x^2$
9. $f(x) = 0.75x^2$	10. $f(x) = -\frac{1}{4}x^2$