

LESSON **9-4** **Technology Lab Recording Sheet** p. 612
The Family of Quadratic Functions**Try This**

1. How would the graph of $y = 6x^2$ compare with the graph of the parent function?

2. How would the graph of $y = \frac{1}{5}x^2$ compare with the graph of the parent function?

3. **Make a Conjecture** Make a conjecture about the effect of a on the graph of $y = ax^2$.

Consider the graphs of $y = -\frac{1}{2}x^2$, $y = -x^2$, $y = -2x^2$, and $y = -3x^2$.

4. Describe the differences in the graphs.

5. How would the graph of $y = -8x^2$ compare with the graph of $y = -x^2$?

6. How do these results affect your conjecture from Problem 3?

Consider the graphs of $y = x^2 - 1$, $y = x^2$, $y = x^2 + 2$, and $y = x^2 + 4$.

7. Describe the differences in the graphs.

8. How would the graph of $y = x^2 - 7$ compare with the graph of the parent function?

9. **Make a Conjecture** Make a conjecture about the effect of c on the graph of $y = x^2 + c$.
