Name _____ Date _____

Skills Maintenance
Non-Linear Functions

Activity 1

Create *x/y* tables for the non-linear functions. Remember to use **PEMDAS** and solve the exponent first. The *x*-values are filled in for you.

1. $y = -2x^2$

x	y
−2	
−1	
0	
1	
2	

2. $y = 5x^2$

x	y
−2	
−1	
0	
1	
2	

3. $y = -x^2$

x	y
−2	
−1	
0	
1	
2	

Name _____ Date _____

Apply Skills
The Radical Sign and Evaluating Numeric Expressions

Activity 1

Solve the radicals in each expression. Remember to use the rules of
PEMDAS. Be sure to consider ± symbols in your answers.

Model	$\sqrt{100 + 44} + 9$ Answer $\sqrt{100 + 44} + 9$ $\sqrt{144} + 9$ $\pm 12 + 9$ $12 + 9$ and $-12 + 9$ 21 or -3

1. $\sqrt{24 + 12}$ _____

2. $\sqrt{56 + 8}$ _____

3. $\sqrt{86 - 5} + 2$ _____

4. $3 \cdot \sqrt{37 + 12}$ _____

5. $2 \cdot \sqrt{4 + 5} + 5$ _____

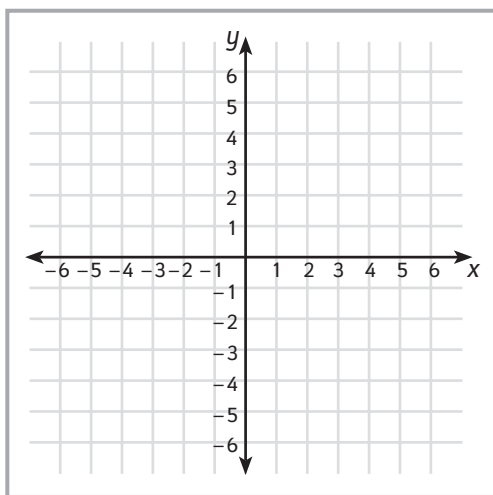Name _____ Date _____

Problem-Solving Activity
Changing the Shape of a Non-Linear Function

Activity 1

Create a table and graph for the functions $y = -\frac{1}{2}x^2$ and $y = -2x^2$. After you create the tables and the graphs, answer the questions.
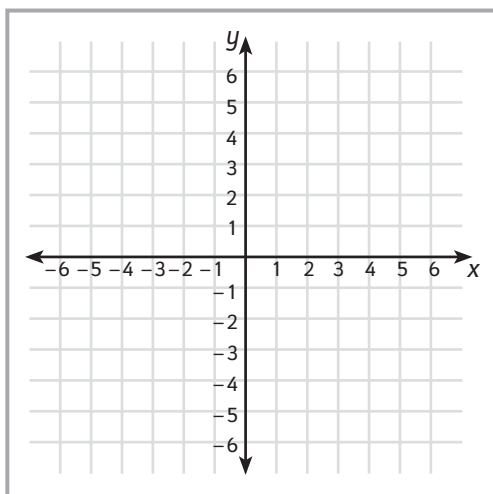
$y = -\frac{1}{2}x^2$

x	y
−3	
−2	
−1	
0	
1	
2	
3	

$y = -2x^2$

x	y
−3	
−2	
−1	
0	
1	
2	
3	

Name _____ Date _____

1. How are the tables different for the two functions?

   _____

   _____

   _____

2. How are the graphs different for the two functions?

   _____

   _____

   _____

3. Explain the impact of a negative coefficient on a parabola. Explain the impact of different-sized negative coefficients on a parabola.

   _____

   _____

   _____

   _____

mBook **Reinforce Understanding**
Use the **mBook** *Study Guide* to review lesson concepts.