CW#___
Math 3

Name: _____

Date: _____

Period: A1 A2 A3 B1

PRACTICE #2: Graphs, Equations, & Descriptions of Transformations

For each family of functions, complete all parts AND label important features of the graphs. Important features include vertices, points of inflection, endpoints, asymptotes, and lines of symmetry.

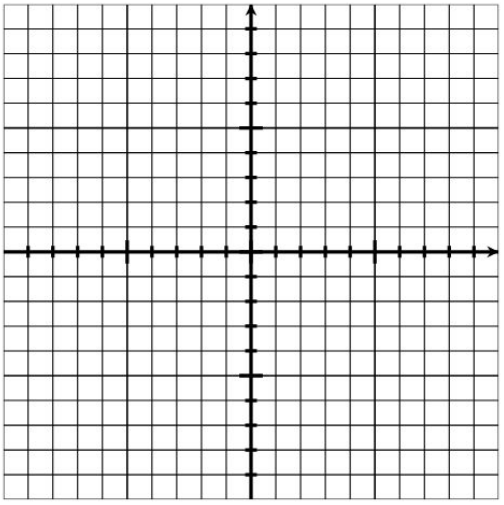
EXAMPLE:
Family of functions: **QUADRATIC FUNCTIONS**

a. What is the equation of the parent function?

b. Graph the parent function on the axes.

c. Graph a curve in this family that is translated 4 units up, oriented down, and vertically compressed by a factor of ½ .

d. What is the equation of this transformation?



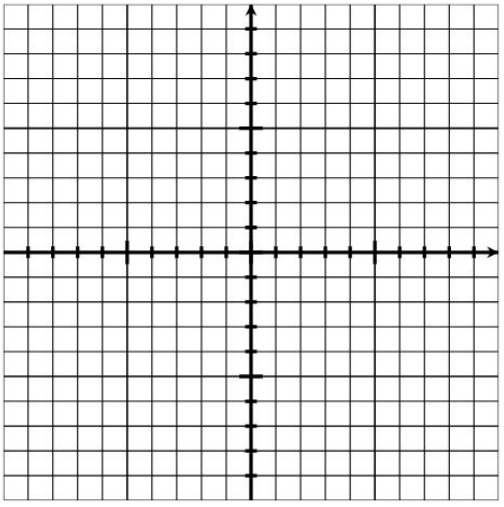
1. Family of functions: **CUBIC FUNCTIONS**

a. What is the equation of the parent function?

b. Graph the parent function on the axes.

c. Graph a curve in this family that is translated 3 units left and 1 unit down.

d. What is the equation of this transformation?



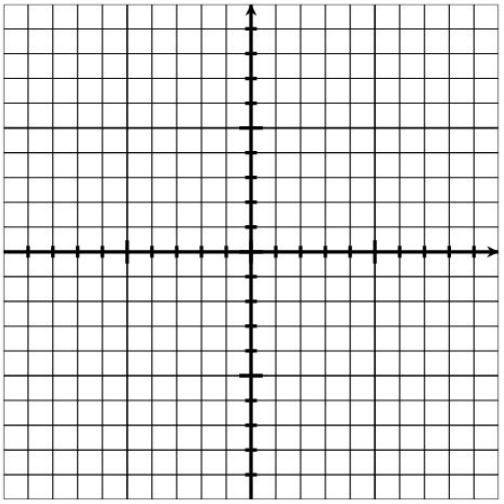
2. Family of functions: **ABSOLUTE VALUE FUNCTIONS**

a. What is the equation of the parent function?

b. Graph the parent function on the axes.

c. Graph a curve in this family that is translated 1 unit to the right, 6 units down, and vertically stretched by a factor of 3.

d. What is the equation of this transformation?



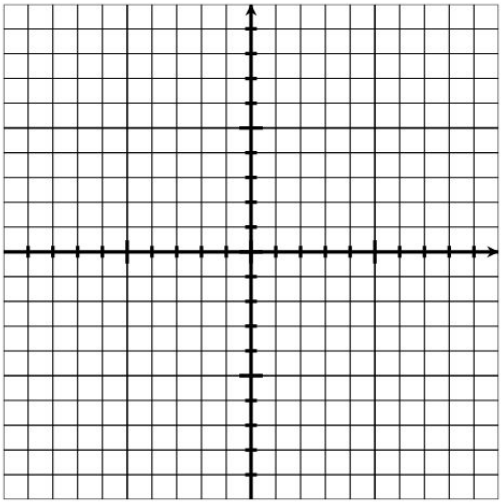
3. Family of functions: **SQUARE ROOT FUNCTIONS**

a. What is the equation of the parent function?

b. Graph the parent function on the axes.

c. Graph a curve in this family that is translated 4 unit to the right, oriented down, and vertically stretched by a factor of 2.

d. What is the equation of this transformation?



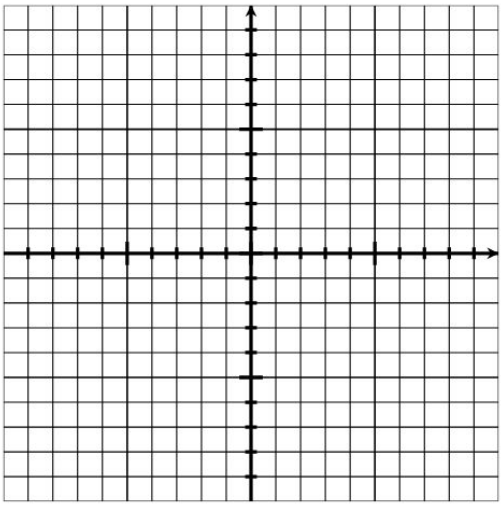
4. Family of functions: **RATIONAL FUNCTIONS**

a. What is the equation of the parent function?

b. Graph the parent function on the axes.

c. Graph a curve in this family that is translated 2 unit to the left and 5 units up.

d. What is the equation of this transformation?



5. Family of functions: **LINEAR FUNCTIONS**

a. What is the equation of the parent function?

b. Graph the parent function on the axes.

c. Graph a line in this family that is translated 4 units up , oriented down, and stretched by a factor of $\frac{4}{5}$.

d. What is the equation of this transformation?