**2.6– Families of Functions**

**Parent Graph** – graph simplest form in a set of functions that form a “family”

**Transformation**—each function in the “family” that is related to the parent

**\*Translation**—type of transformation that shifts parent graph horizontally, vertically, or both without changing the shape of the parent graph

**\*\*Use graphing calculators (like they did in Geometry) to “play around” with shifts of basic functions**

Ex:

**Reflection- flips the graph of a function across a line, such as the x-axis or y-axis**

**Side Note:**

When you reflect a graph over the y-axis the x-values change signs and the y-values stay the same.

When you reflect a graph over the x-axis the y-values change signs and the x-values stay the same

*Example:*

*Reflect a function Algebraically.*

Let g(x) be the reflection of in the y-axis and h(x) in the x-axis. What is the function rule for g(x) and h(x)?

***HMWK: pg 103 #1-6, 13, 19, 21, 41, 42***