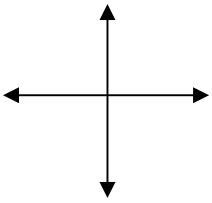
Math 111
Basic Function Library

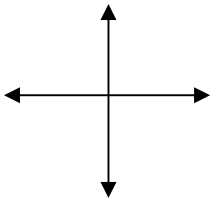
You will want to know these basic functions and their shapes / behavior. They will be important in recognizing the type of functions you might see graphically, in an equation or expression, as well as graph transformations.

Quickly sketch a graph of the basic function:

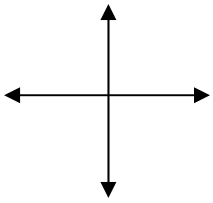
$f(x) = x$



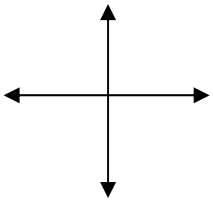
$f(x) = x^2$



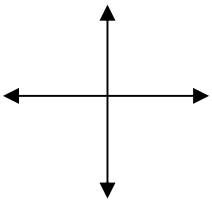
$f(x) = x^3$



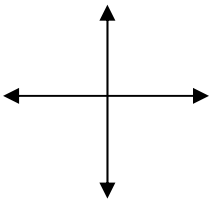
$f(x) = x^4$



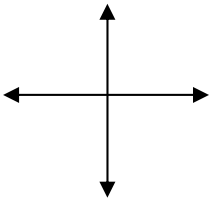
$f(x) = x^5$



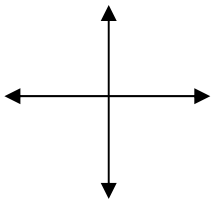
$f(x) = x^n$ where n is odd.



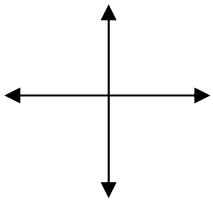
$f(x) = x^m$ where m is even.



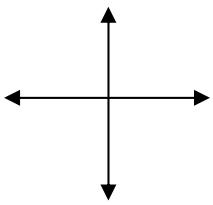
$f(x) = \sqrt{x}$



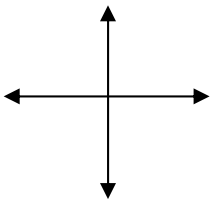
$f(x) = \sqrt[3]{x}$



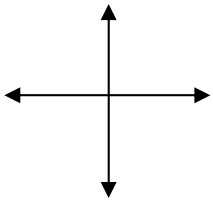
$f(x) = \sqrt[4]{x}$



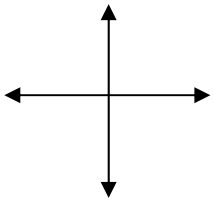
$f(x) = \sqrt[5]{x}$



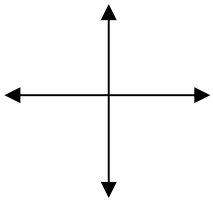
$f(x) = |x|$



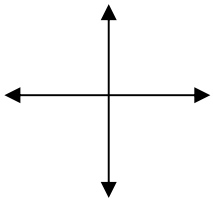
$f(x) = \frac{1}{x}$



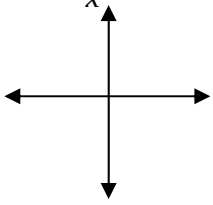
$f(x) = \frac{1}{x^2}$



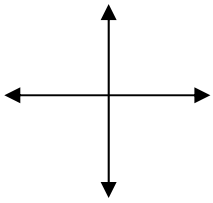
$f(x) = \frac{1}{x^3}$



$f(x) = \frac{1}{x^n}$ where n is odd.



$f(x) = \frac{1}{x^m}$ where m is even.



$f(x) = c$ where c is a constant.