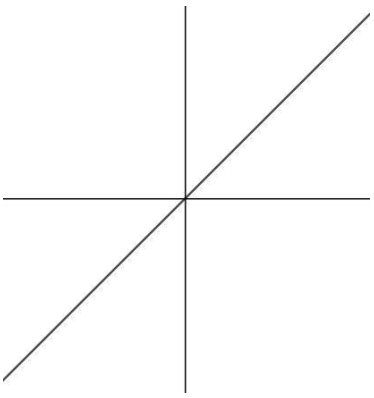
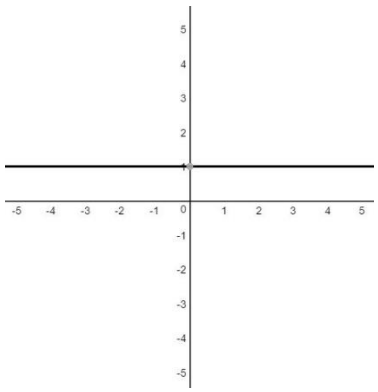
The Basic Shape Functions



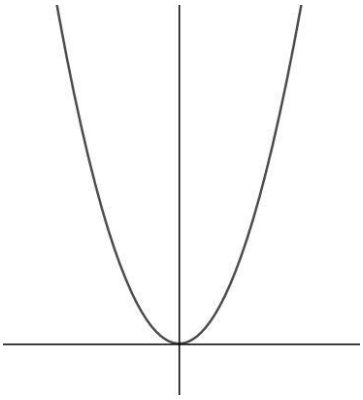
The Identity Function: $i(x) = x$

Domain: $\Re$ Range: $\Re$



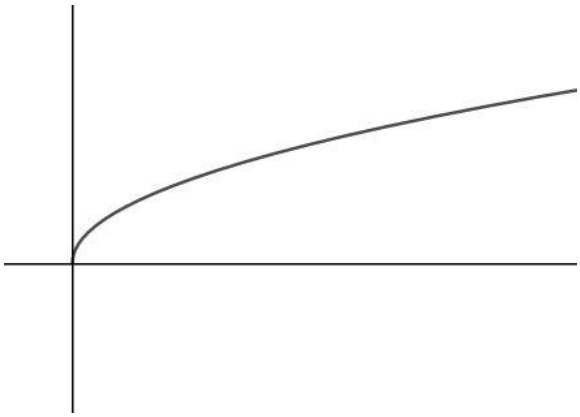
The Constant Function at 1: $con_1(x) = 1$

Domain: $\Re$ Range: $\{1\}$



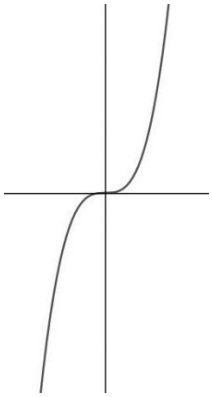
The Square Function: $sqr(x) = x^2$

Domain: $\Re$ Range: $[0,\infty)$



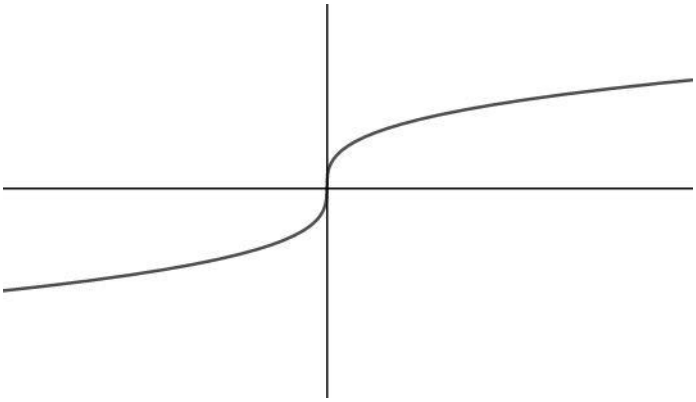
The Square Root Function: $sqrt(x) = \sqrt{x}$

Domain: $[0,\infty)$ Range: $[0,\infty)$



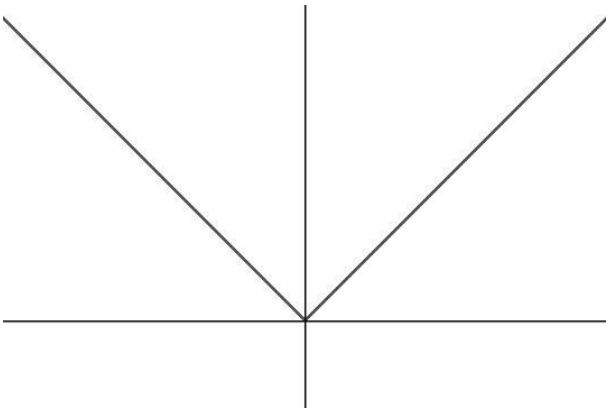
The Cube Function: $cube(x) = x^3$

Domain: $\Re$ Range: $\Re$



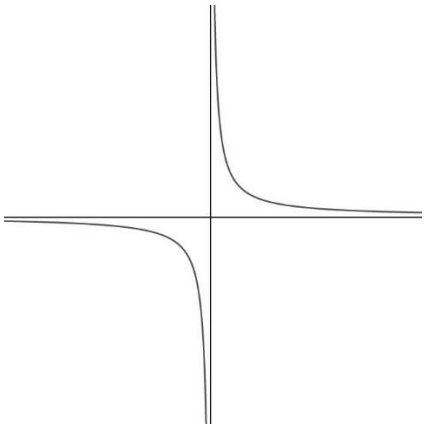
The Cube Root Function: $cbrt(x) = \sqrt[3]{x}$

Domain: $\Re$ Range: $\Re$



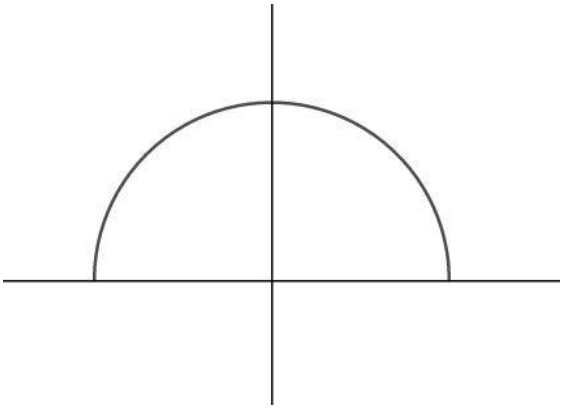
The Absolute Value Function: $abs(x) = |x|$

Domain: $\Re$ Range: $[0,\infty)$



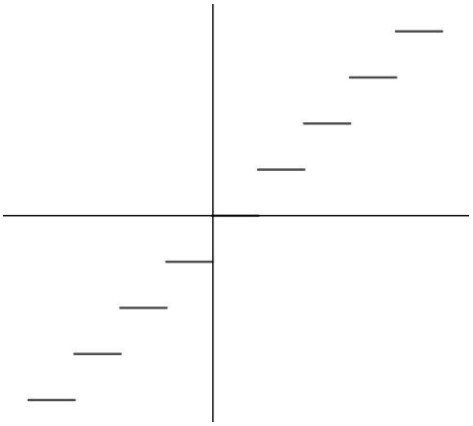
The Reciprocal Function: $recip(x) = \frac{1}{x}$

Domain: $\Re - \{0\}$ Range: $\Re - \{0\}$



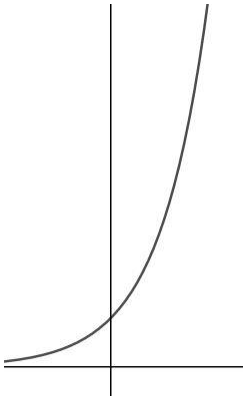
The Semi-Circle Function: $semi(x) = \sqrt{1-x^2}$

Domain: $[-1,1]$ Range: $[0,1]$



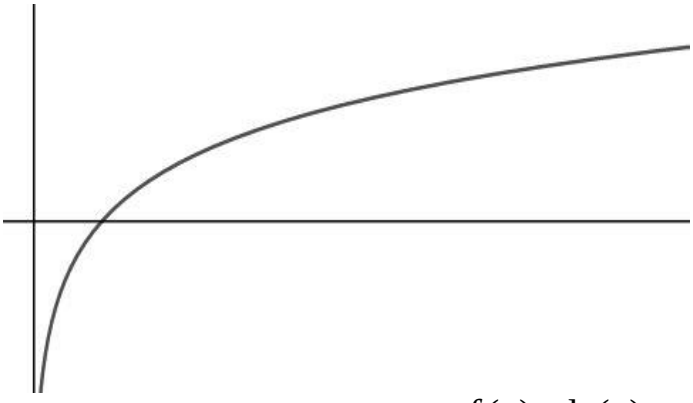
The Greatest Integer Function: $\text{int}(x) = x$

Domain: $\Re$ Range: The Integers, $\mathbb{Z}$



The Exponential Function: $\exp(x) = e^x$

Domain: $\Re$ Range: $(0,\infty)$



The Natural Logarithm Function: $f(x) = \ln(x)$

Domain: $(0,\infty)$ Range: $\Re$