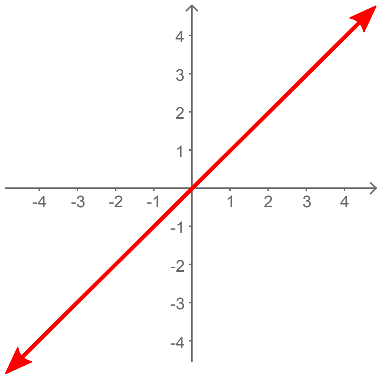
### Identity Function

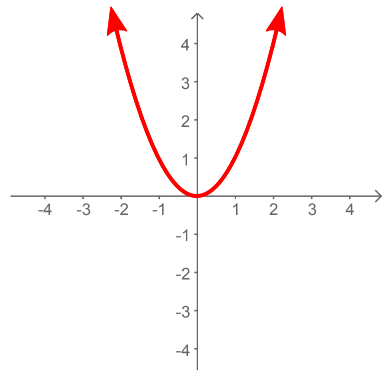
$f(x)=x$




The domain and range of the identity function are both the set of all real numbers. The x and y interecepts both occur at the origin (0, 0). It is increasing over its entire domain. The identity function does not have any maximums, minimums, asymptoes, or concavity.

### Square Function

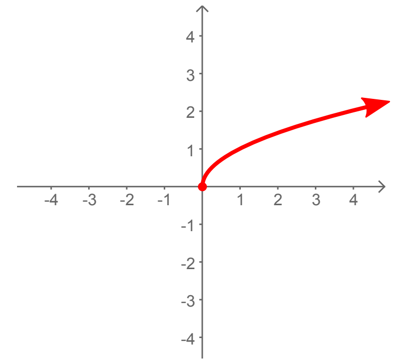
$f(x)=x^2$




The domain of the square function is the set of all real numbers, but the domain is limited to y≥0. Both the x and y interecepts are (0, 0). The global minimum also occurs at (0, 0). It is decreasing on the interval (-∞, 0), increasing on (0, ∞), and always concave up. There are no maximums or asymptoes.

### Square Root Function

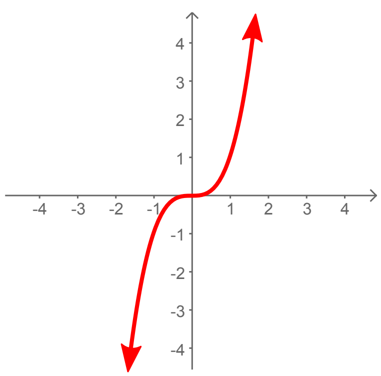
$f(x)=\sqrt{x}$




The domain of the square root function is x≥0 and its range is y≥0. The x and y interecepts are both at (0, 0), as is the global minimum. It is increasing over its entire domain and always concave down. The square root function does not have any maximums or asymptotes.

### Cube Function

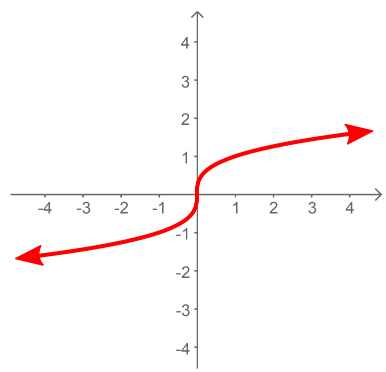
$f(x)=x^3$




The set of all real numbers is both the domain and the range of the cube function. The x and y interecepts are both (0, 0). It is increasing over its entire domain, concave down on the interval (-∞, 0), and concave up on (0, ∞). The cube function does not have any maximums, minimums, or asymptoes.

### Cube Root Function

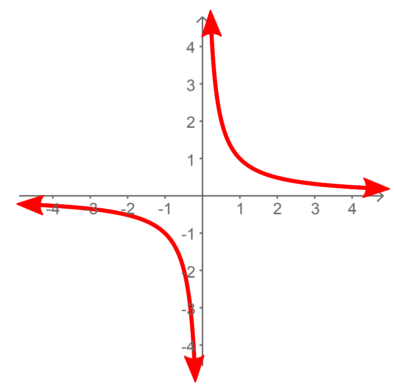
$f(x)=\sqrt[3]{x}$




Both the domain and range of the cube root function are all real numbers. The x and y interecepts are both (0, 0). It is increasing over its entire domain, concave up on the interval (-∞, 0), and concave down on (0, ∞). The cube function does not have any maximums, minimums, or asymptoes.

### Reciprocal Function

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




The domain and range of the reciprocal function are all real numbers except 0. It has a vertical asymptote at x=0 and a horizontal asymptote at y=0. It decreases over its entire domain, is concave down on (-∞, 0), and concave up on (0, ∞). The reciprocal function has no intercepts, maximums, or minimums.