Library of Functions
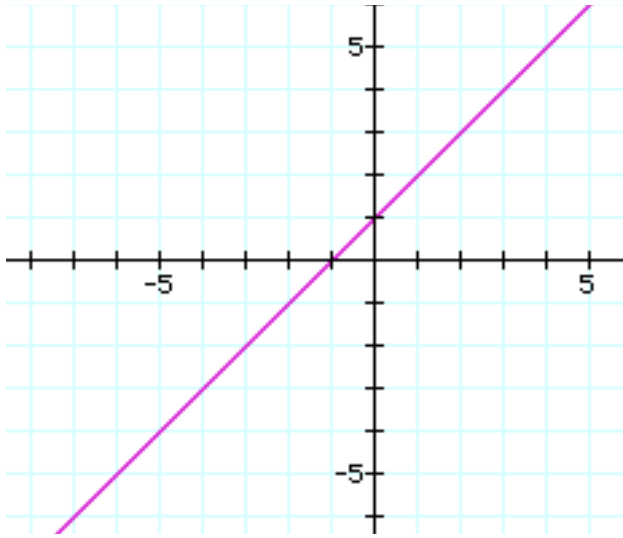

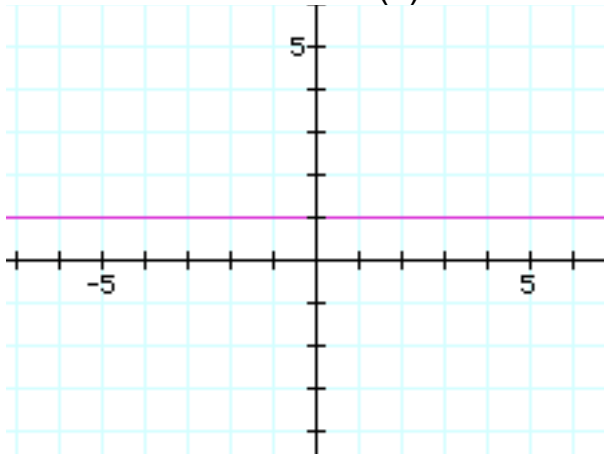**Linear Function:** $f(x) = mx + b$

Domain:

Intervals over which f is increasing:

Intervals over which f is decreasing:
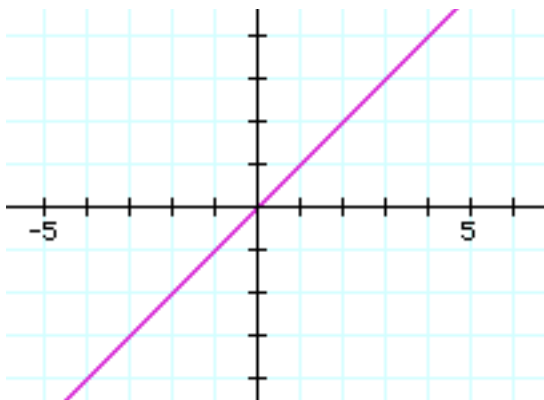

Constant Function: $f(x) = c$

Domain:

Intervals over which f is increasing:

Intervals over which f is decreasing:

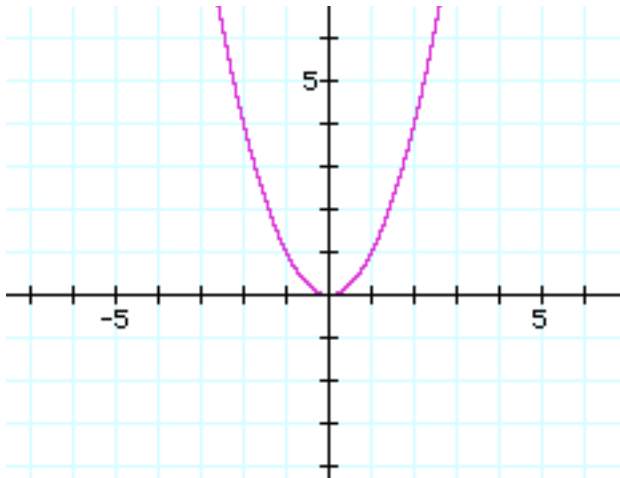**Identity Function:** $f(x) = x$

Domain:

Intervals over which f is increasing:

Intervals over which f is decreasing:

Library of Functions
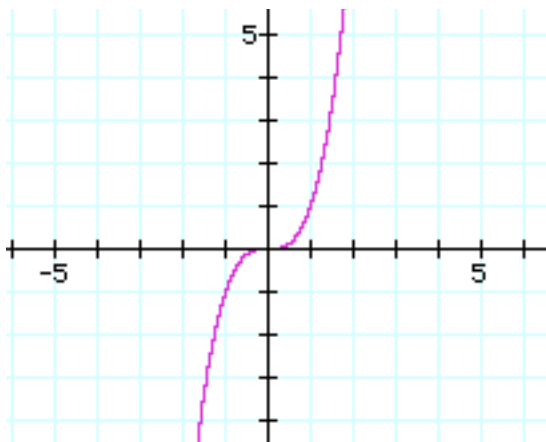
Square Function: $f(x) = x^2$

Domain:

Intervals over which f is increasing:

Intervals over which f is decreasing:
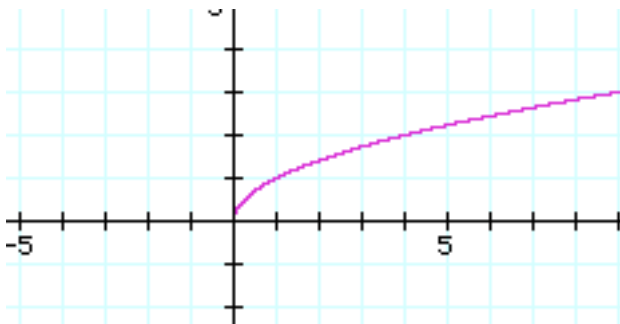
Cube Function: $f(x) = x^3$

Domain:

Intervals over which f is increasing:

Intervals over which f is decreasing:

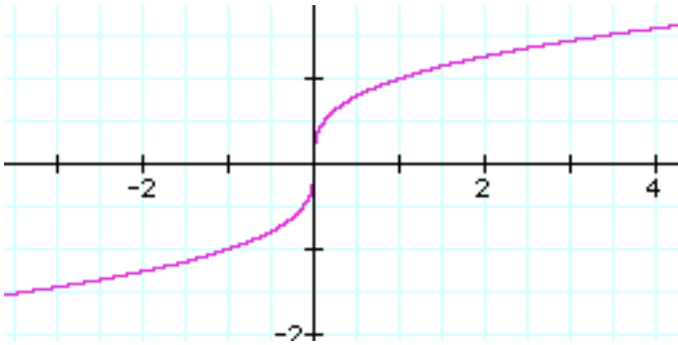**Square Root Function:** $f(x) = \sqrt{x}$

Domain:

Intervals over which f is increasing:

Intervals over which f is decreasing:

Library of Functions
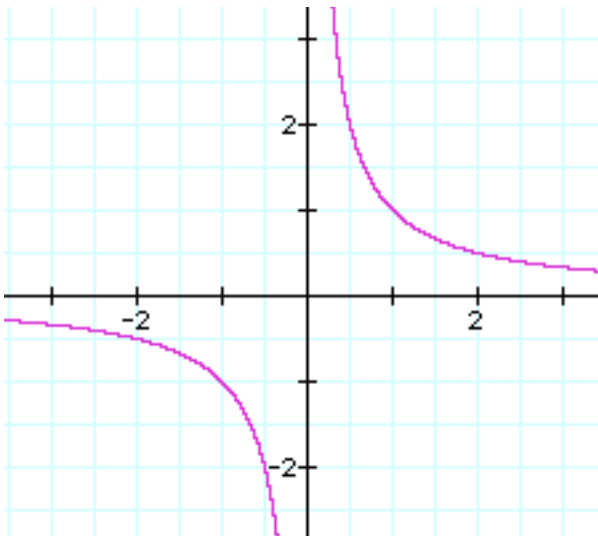
Cube Root Function: $f(x) = \sqrt[3]{x}$

Domain:

Intervals over which f is increasing:

Intervals over which f is decreasing:

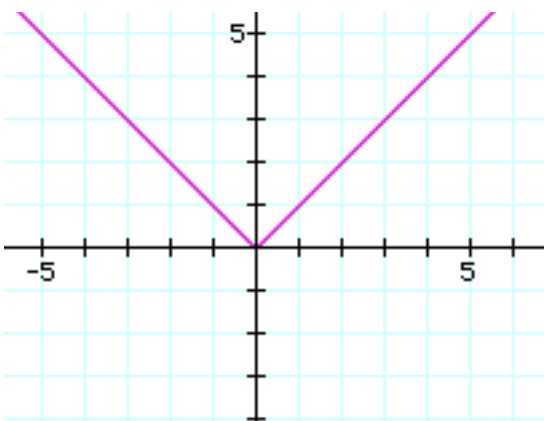**Reciprocal Function:** $f(x) = \dfrac{1}{x}$

Domain:

Intervals over which f is increasing:

Intervals over which f is decreasing:

Absolute Value Function: $f(x) = |x|$

Domain:

Intervals over which f is increasing:

Intervals over which f is decreasing: