The Natural Log

Name _____

Date _____ Period _____

The Natural Log is a special logarithm that has a base of e.

$$\log_e x$$

$$\ln x$$

Natural Log Form vs. Exponential Form

$$\ln x = y \longleftrightarrow x = e^y$$

Logarithmic Form Exponential Form

The Natural Log is a special logarithm that has a base of e.

$$\ln e = 1$$

$$\ln x$$

Natural Log Form vs. Exponential Form

$$\ln x = y \longleftrightarrow x = e^y$$

Logarithmic Form Exponential Form

Evaluating Natural Logs

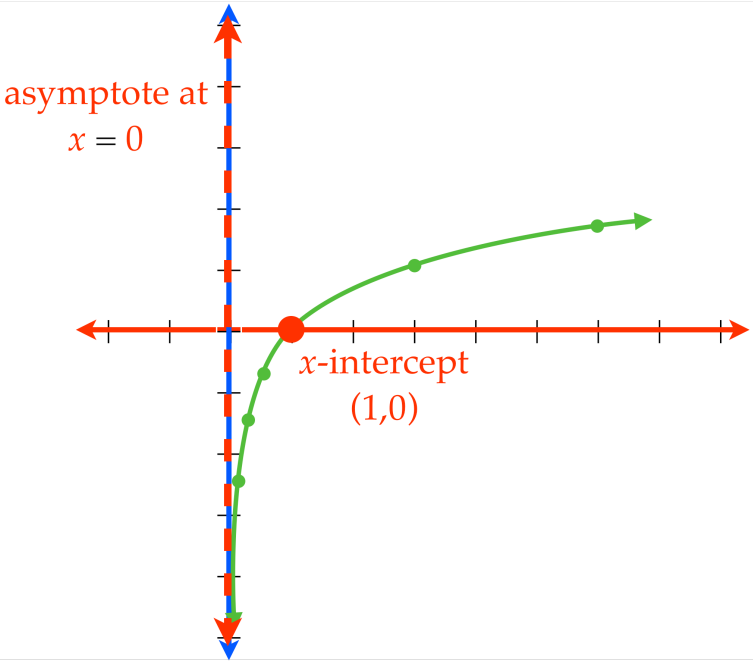
$\ln 5$ $\ln 2$ $\ln -3$

The domain of Natural Logs are all values of $x > 0$.

$f(x) = \ln x$

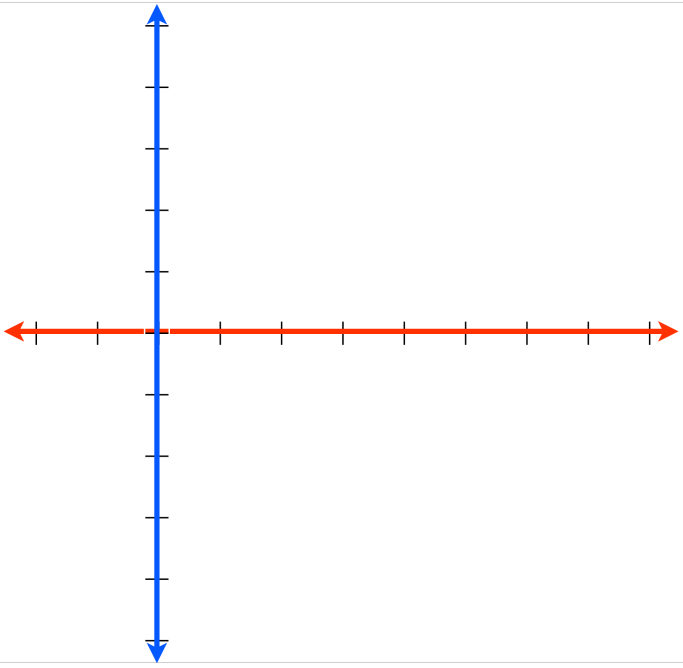
x	$f(x)$
0.1	-2.3
0.25	-1.4
0.5	-0.7
0.75	-0.3
1	0
3	1.1
6	1.8

The domain of Natural Logs are all values of $x > 0$.



Graph the following using transformations

$$f(x) = \ln(x + 2) + 3$$



Graph the following using transformations

$$f(x) = -\ln(x - 1) - 2$$