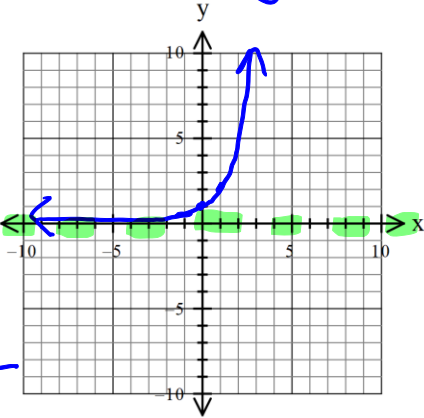


Parent Functions #8

Name of Graph: exponential

Equation: $f(x) = a^x$ or $y = a^x$

x	$f(x)$
-1	$\frac{1}{a}$
0	1
1	a



$a = \text{base}$

$y = 2^x$

Key Features

Domain: $(-\infty, \infty)$

Range: $(0, \infty)$

x-intercept(s): none

y-intercept: $(0, 1)$

Increasing: $(-\infty, \infty)$

Decreasing: N/A

Constant: N/A

Positive: $(-\infty, \infty)$

Negative: N/A

Maximums / Minimums N/A

Symmetry: N/A

End Behavior:

$$\lim_{x \rightarrow -\infty} f(x) = 0$$

$$\lim_{x \rightarrow \infty} f(x) = \infty$$

Asymptote: $y = 0$ or $y = k$

asymptote moves if there is a k
or translate up & down

inverse function = logarithm

$$e \approx 2.72$$

transformation eq.

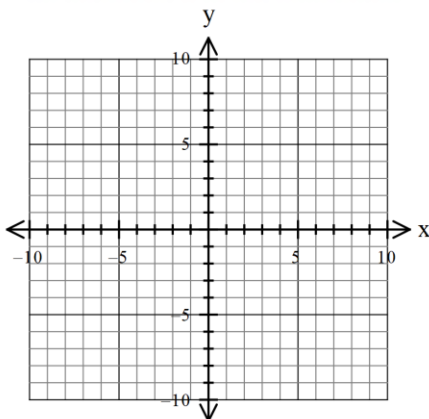
$$f(x) = b \cdot a^{c(x-h)} + k$$

Parent Functions #8

Name of Graph: _____

Equation: _____

x	$f(x)$



Key Features

Domain:

Range:

x-intercept(s):

y-intercept:

Increasing:

Decreasing:

Constant:

Positive:

Negative:

Maximums / Minimums

Symmetry:

End Behavior:

$$\lim_{x \rightarrow -\infty} f(x) =$$

$$\lim_{x \rightarrow \infty} f(x) =$$

Asymptote: _____

Steps for solving an exponential equation:

Steps for solving an exponential equation: