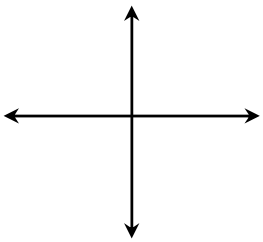
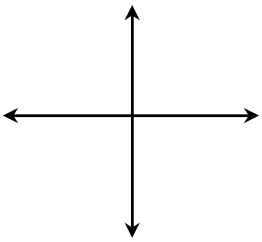
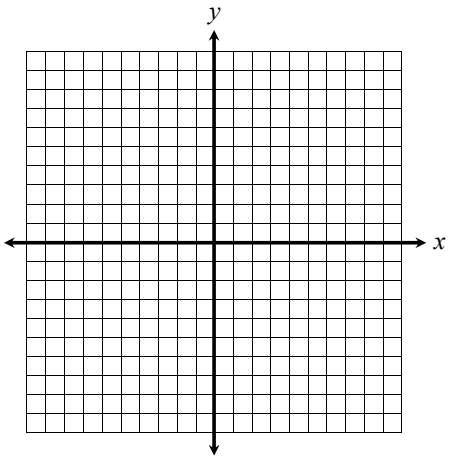
Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples
LOGARITHMIC *Parent Function*	A logarithmic function is the **inverse** of an exponential function. Using your graphing calculator, sketch the following graphs: $f(x) = \log x$  $f(x) = 10^x$ 
	Because you can only graph base 10 logs on your calculator, you will need to use the inverse exponential function, then invert the values from the table to graph the logarithmic function.

Directions: Graph each function and identify its key characteristics.

1. $f(x) = \log_2 x$



Domain: _____

Range: _____

End Behavior:

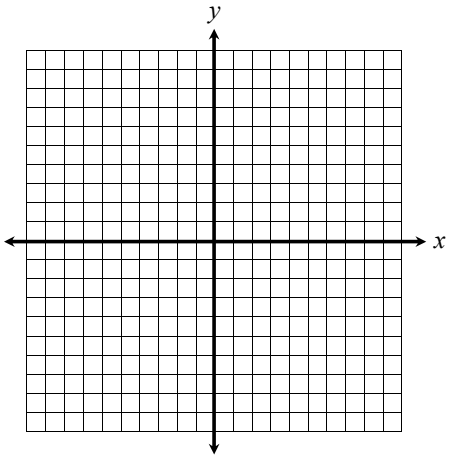
As $x \to$ _____, $f(x) \to \infty$

As $x \to$ _____, $f(x) \to -\infty$

***x*-intercept:** _____

Asymptote: _____

2. $f(x) = \log_{\frac{1}{3}} x$



Domain: _____

Range: _____

End Behavior:

As $x \to$ _____, $f(x) \to \infty$

As $x \to$ _____, $f(x) \to -\infty$

***x*-intercept:** _____

Asymptote: _____