

## Math D Unit 5 Activity - Graphing Exponential and Log Functions

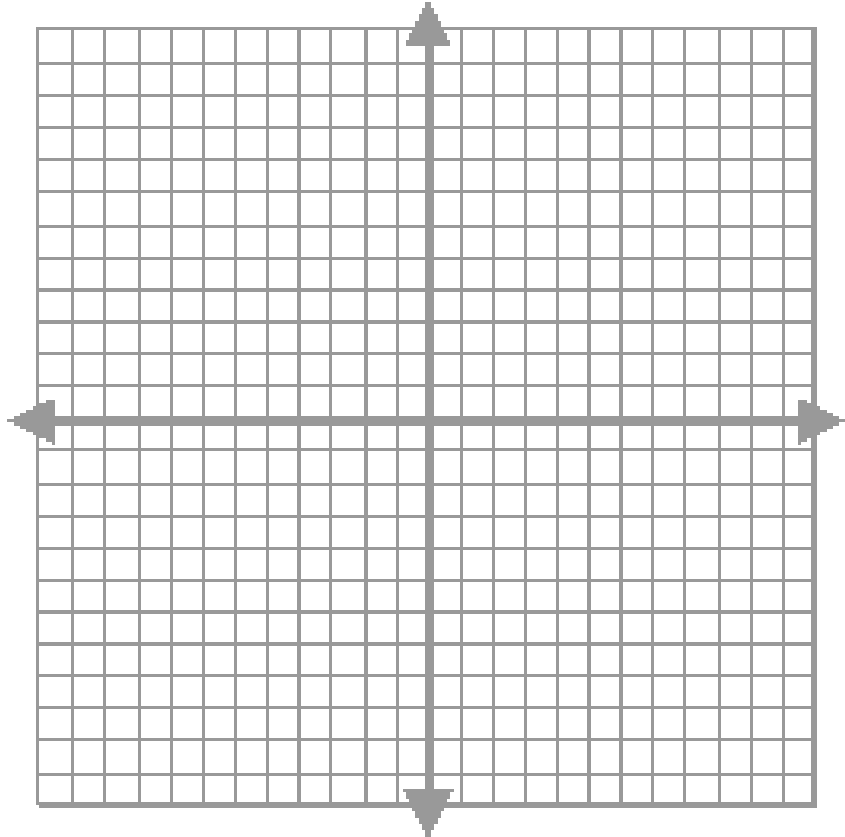
Complete the following tables and graph each function on the same coordinate plane. Include a scale on your graph and label each function.

1.  $f(x) = 2^x$

$x$	$2^x$	$y$
-2	$2^{-2}$	$\frac{1}{4}$
-1		
0		
1		
2		
3		

$g(x) = \log_2 x$

$x$	$\log_2 x$	$y$
$\frac{1}{4}$	$\log_2 \frac{1}{4}$	-2
$\frac{1}{2}$		
1		
2		
4		
8		



What is the domain of  $f(x)$ ? D:

What is the range of  $f(x)$ ? R:

What is the domain of  $g(x)$ ? D:

What is the range of  $g(x)$ ? R:

Notice the  $x$ -values from the tables above are convenient values to use for these specific functions. Find convenient  $x$ -values to graph the functions on the back of this page. Choose values for  $x$  that are representative of the entire domain of each function. The first table has been started. Create a table for each function before graphing. Choose a scale for the graph that makes sense based on the table of values.

Name: \_\_\_\_\_

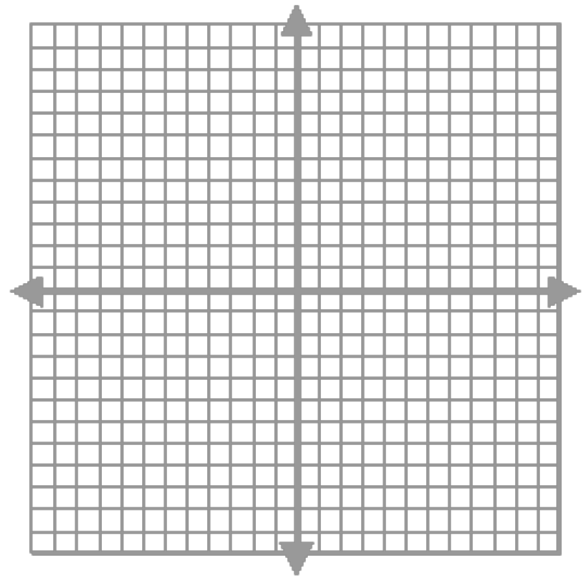
Due Date: \_\_\_\_\_

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2.  $f(x) = 3^x$

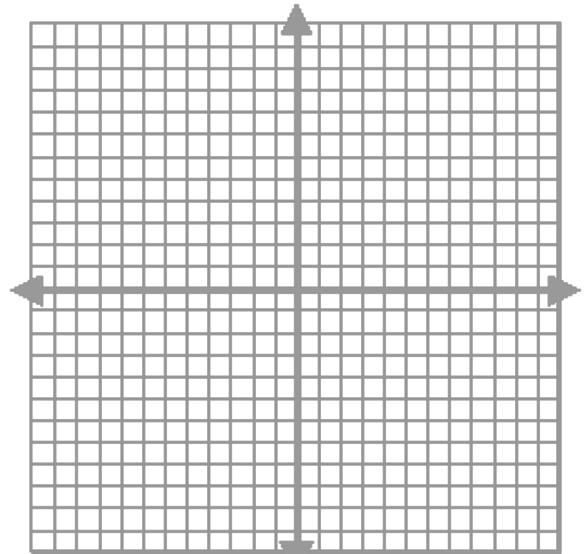
$g(x) = \log_3 x$

$x$	$3^x$	$y$
-2		



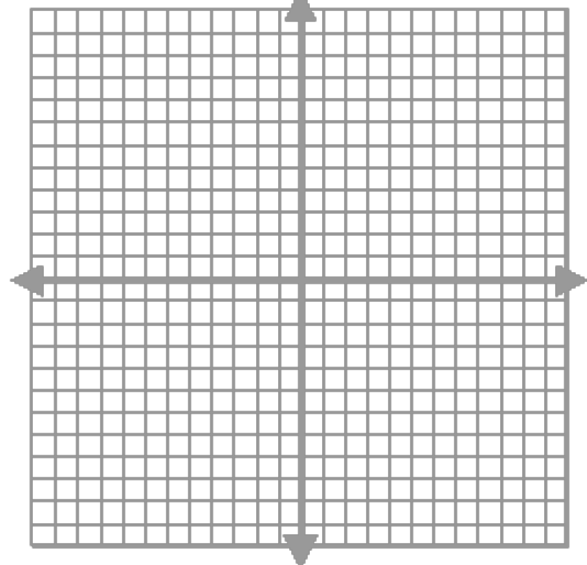
3.  $f(x) = 10^x$

$g(x) = \log x$



4.  $f(x) = e^x$

$g(x) = \ln x$



5. If asked to graph a logarithmic function, how will you choose the x-values required to create a complete picture of the graph?