

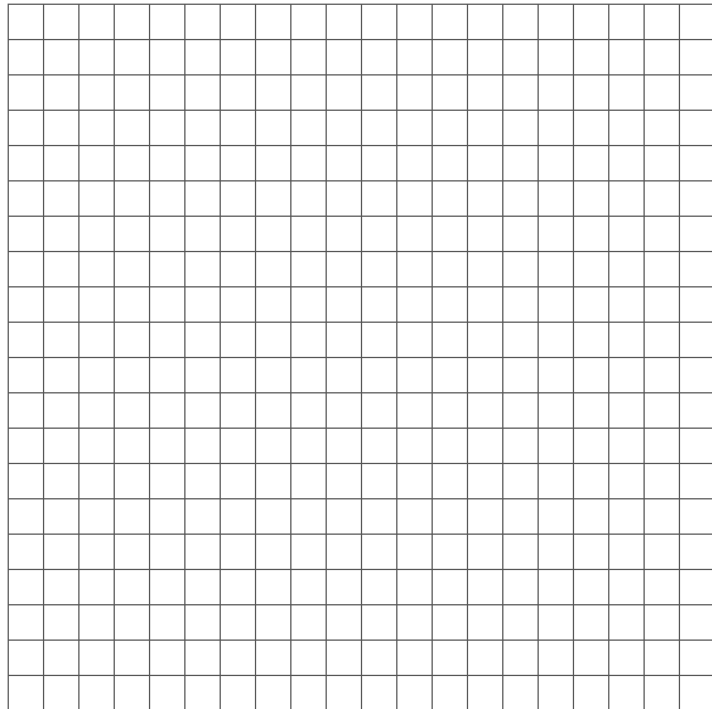
Math Lab: Graphing Exponential Functions

These notes are intended as a summary of section 5.1 (p. 340 – 341) in your workbook. You should also read the section for more complete explanations and additional examples.

The Graphs of Exponential Functions

Using a table of values, graph the function $y = 2^x$.

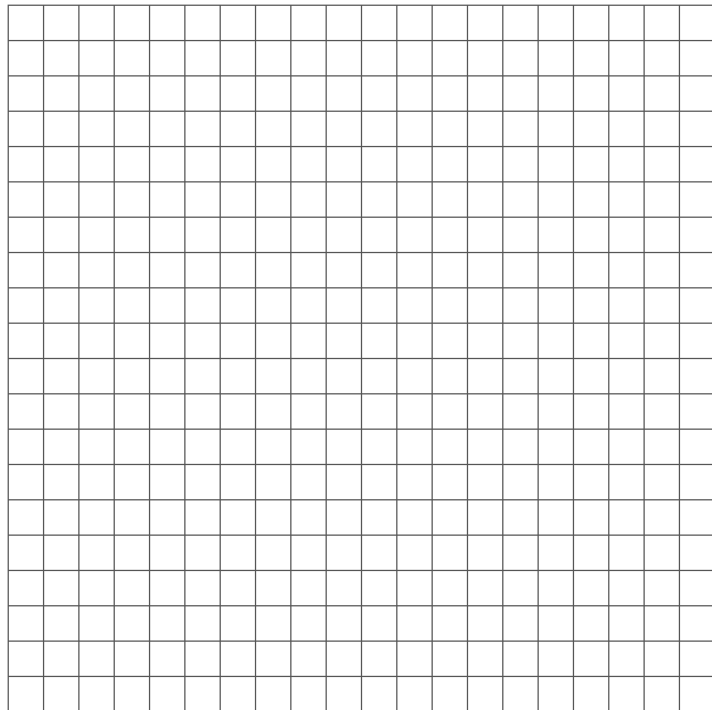
x	y
-3	
-2	
-1	
0	
1	
2	
3	



Describe any properties of the graph, such as intercepts, asymptotes, domain, and range.

Using a table of values, graph the function $y = \left(\frac{1}{2}\right)^x$.

x	y
-3	
-2	
-1	
0	
1	
2	
3	



Describe any properties of the graph, such as intercepts, asymptotes, domain, and range.

How are the two functions alike? How are they different?

Use the computer simulation to graph each of the functions below, then complete the table.

Function	x -intercept	y -intercept	Equation of Asymptote	Domain	Range
$y = 4^x$					
$y = \left(\frac{5}{3}\right)^x$					
$y = \left(\frac{1}{3}\right)^x$					
$y = \left(\frac{2}{5}\right)^x$					

Each of the functions we graphed in this activity is an **exponential function**. Do you think that name is appropriate? Why?