Math 041 Assignment 3.1   Name_____

DIRECTIONS To receive full credit, you must provide complete solutions to the following problems on an attached lined paper with clearly numbered problem solutions. Transfer all your answers to the space provided on the test paper.
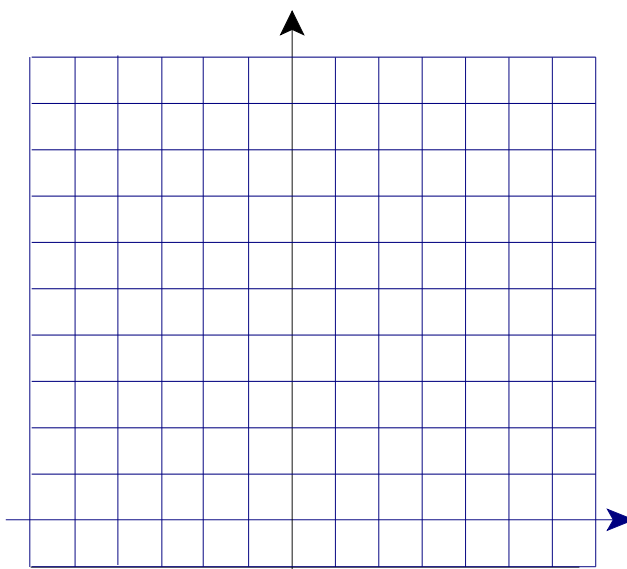
Exponential Functions.

1.   Evaluate the function at the given values.

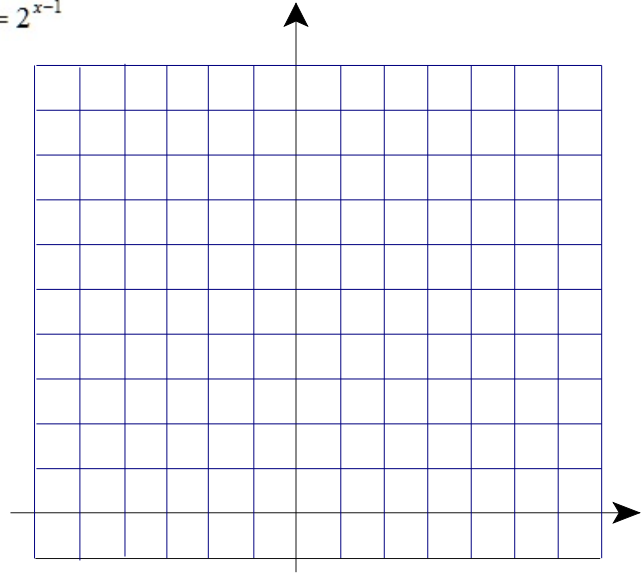$f(x) = (\frac{1}{2})^x, \quad x = 0, 1, 2, -2, -1, \frac{1}{2}, \sqrt{2}, \pi.$

2.   Complete the tables and sketch the graphs.

x	$f(x) = 2^x$	$f(x) = \left(\frac{1}{2}\right)^x$
-2		
-1		
0		
1		
2		

3.   Sketch the graphs of $f(x) = 2^{x+1}$, $g(x) = 2^{x-1}$

x	$f(x) = 2^{x+1}$	$g(x) = 2^{x-1}$
-1		
–2		
-3		
0		
1		
2		
3		

4.   Sketch the graphs of $f(x) = 2^{-x}$, and $g(x) = 2^{x}$ on the same axes.

x	f(x)	g(x)
-2		
-1		
0		
1		
2		
3		