

Graphing Exponential Functions. Section _____ Name _____ Date _____

Exponential function: $f(x) = A b^x$. Base = b . Always, $b > 0$, $b \neq 1$, $A > 0$.

If $b > 1$, it's an exponential growth function. If $0 < b < 1$, it's an exponential decay function.

Directions: from the given information fill in the six columns of the table below.

	Formula	Base	Const.	Table of values		Growth or decay?	Graph
1	$f(x) = 2 \cdot 3^x$	3	2	x	f(x)	Growth, because $b > 1$	
				-2	2/9		
				-1	2/3		
				0	2		
				1	6		
				2	18		
2	$f(x) =$	2/3	5	x	f(x)		
				-2			
				-1			
				0			
				1			
				2			
3	$f(x) = (3/2)(1/3)^x$			x	f(x)		
				-2			
				-1			
				0			
				1			
				2			
4	$f(x) = (1/2)2^{-x}$			x	f(x)		
				-2			
				-1			
				0			
				1			
				2			
5	$f(x) =$			x	f(x)		
				-2			
				-1			
				0			
				1	6		
				2	8		
6	$f(x) =$	4/3		x	f(x)		
				-2			
				-1			
				0	4		
				1			
				2			
7	$f(x) = 8 \cdot 10^x$			x	f(x)		
				-2			
				-1			
				0			
				1			
				2			