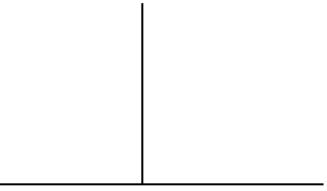
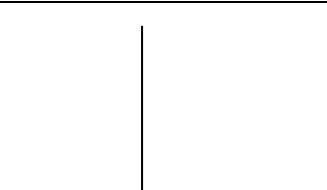
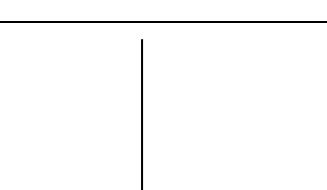
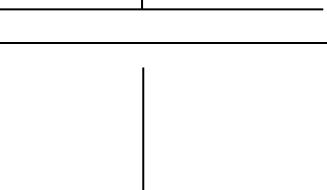
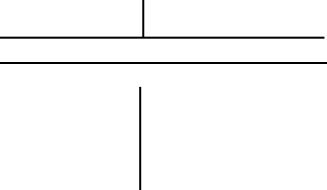
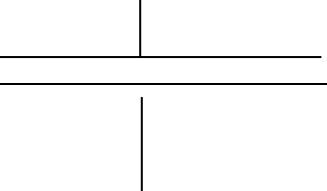
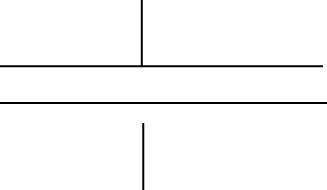


Graphing Exponential Functions. Section _____ Name _____ Date _____

Exponential function: $f(x) = A \cdot b^x$. 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	<table border="1"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr><td>-2</td><td>2/9</td></tr> <tr><td>-1</td><td>2/3</td></tr> <tr><td>0</td><td>2</td></tr> <tr><td>1</td><td>6</td></tr> <tr><td>2</td><td>18</td></tr> </tbody> </table>	x	f(x)	-2	2/9	-1	2/3	0	2	1	6	2	18	Growth, because $b > 1$	
x	f(x)																	
-2	2/9																	
-1	2/3																	
0	2																	
1	6																	
2	18																	
2	$f(x) =$	2/3	5	<table border="1"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr><td>-2</td><td></td></tr> <tr><td>-1</td><td></td></tr> <tr><td>0</td><td></td></tr> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> </tbody> </table>	x	f(x)	-2		-1		0		1		2			
x	f(x)																	
-2																		
-1																		
0																		
1																		
2																		
3	$f(x) = (3/2)(1/3)^x$			<table border="1"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr><td>-2</td><td></td></tr> <tr><td>-1</td><td></td></tr> <tr><td>0</td><td></td></tr> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> </tbody> </table>	x	f(x)	-2		-1		0		1		2			
x	f(x)																	
-2																		
-1																		
0																		
1																		
2																		
4	$f(x) = (1/2)2^{-x}$			<table border="1"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr><td>-2</td><td></td></tr> <tr><td>-1</td><td></td></tr> <tr><td>0</td><td></td></tr> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> </tbody> </table>	x	f(x)	-2		-1		0		1		2			
x	f(x)																	
-2																		
-1																		
0																		
1																		
2																		
5	$f(x) =$			<table border="1"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr><td>-2</td><td></td></tr> <tr><td>-1</td><td></td></tr> <tr><td>0</td><td></td></tr> <tr><td>1</td><td>6</td></tr> <tr><td>2</td><td>8</td></tr> </tbody> </table>	x	f(x)	-2		-1		0		1	6	2	8		
x	f(x)																	
-2																		
-1																		
0																		
1	6																	
2	8																	
6	$f(x) =$	4/3		<table border="1"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr><td>-2</td><td></td></tr> <tr><td>-1</td><td></td></tr> <tr><td>0</td><td>4</td></tr> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> </tbody> </table>	x	f(x)	-2		-1		0	4	1		2			
x	f(x)																	
-2																		
-1																		
0	4																	
1																		
2																		
7	$f(x) = 8 \cdot 10^x$			<table border="1"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr><td>-2</td><td></td></tr> <tr><td>-1</td><td></td></tr> <tr><td>0</td><td></td></tr> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> </tbody> </table>	x	f(x)	-2		-1		0		1		2			
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