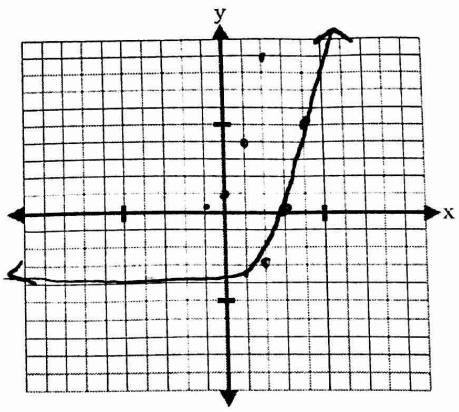
Review for Quiz – Exponential Functions Name: Key

1) $y = 3^x$

x	y	
-1	1/3	$\times 3$
0	1	$\times 3$
1	3	$\times 3$
2	9	$\times 3$
3	27	

Graph: $y = 3^{x-2} - 4$



Growth OR **Decay**

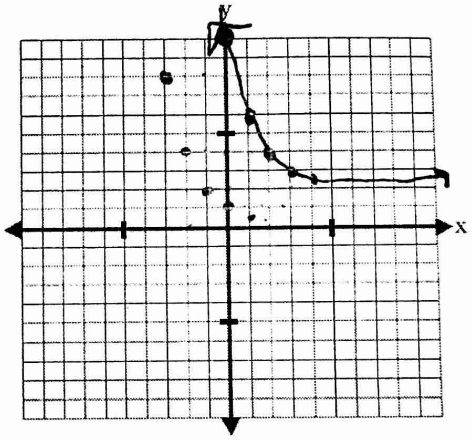
Describe the transformations and where the horizontal asymptote is for the new graph.

right 2, down 4 $y = -4$

2) $y = \left(\frac{1}{2}\right)^x$

x	y	
-3	8	$\times \frac{1}{2}$
-2	4	$\times \frac{1}{2}$
-1	2	$\times \frac{1}{2}$
0	1	$\times \frac{1}{2}$
1	1/2	

Graph: $y = \left(\frac{1}{2}\right)^{x-3} + 2$



Growth OR **Decay**

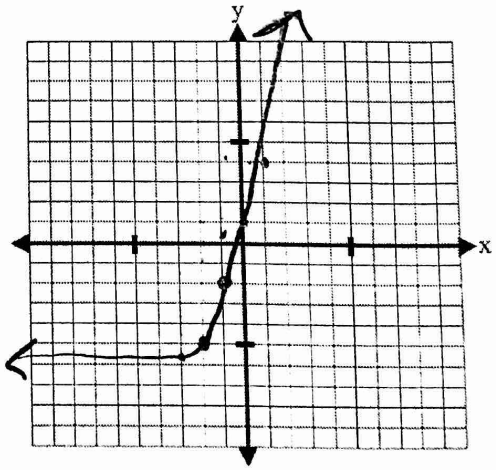
Describe the transformations and where the horizontal asymptote is for the new graph.

right 3, up 2 $y = 2$

3) $y = 4^x$

x	y	
-1	1/4	$\times 4$
0	1	$\times 4$
1	4	$\times 4$
2	16	$\times 4$
3	64	

Graph: $y = 4^{x+2} - 6$



Growth OR **Decay**

Describe the transformations and where the horizontal asymptote is for the new graph.

left 2, down 6 $y = -6$