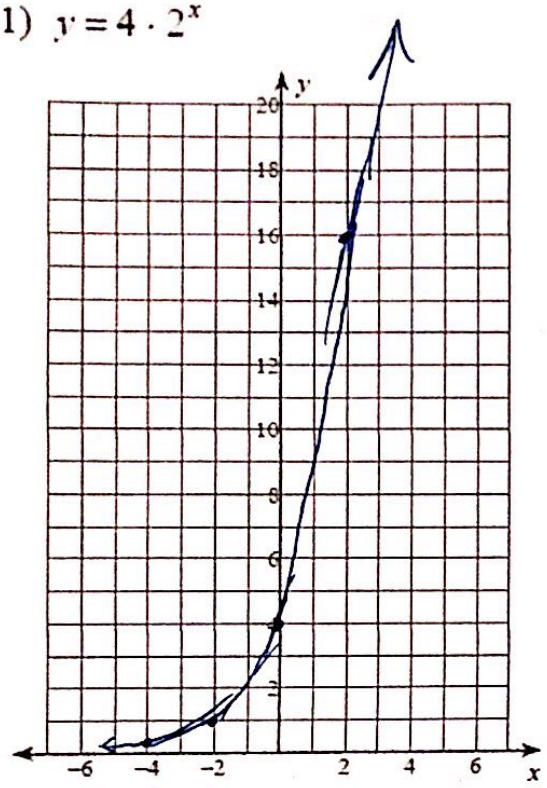
Name: _____ **Date:** _____ **HW #84 Graph Exponentials**

Graph each equation.

1) $y = 4 \cdot 2^x$

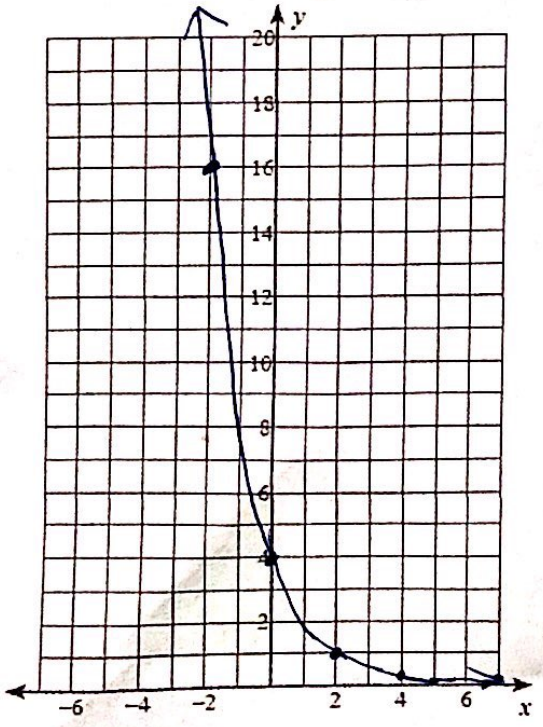


x	f(x)
-4	1/4
-2	1
0	4
2	16
4	64

This is exponential growth.

The asymptote is ~~x=0~~ y=0.

2) $y = 4 \cdot \left(\frac{1}{2}\right)^x$



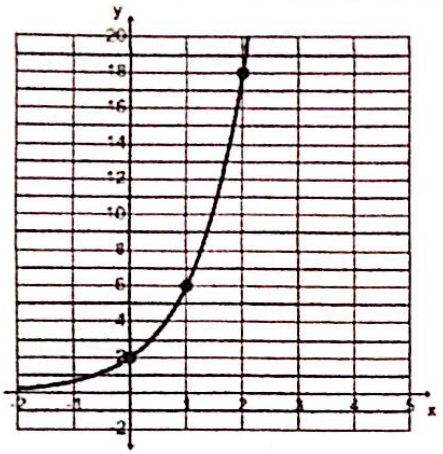
x	f(x)
-4	64
-2	16
0	4
2	1
4	1/4

This is exponential decay.

The range is $(0, \infty)$.

Determine the exponential equation for each of the following graphs.

3) $f(x) = 2 \cdot 3^x$

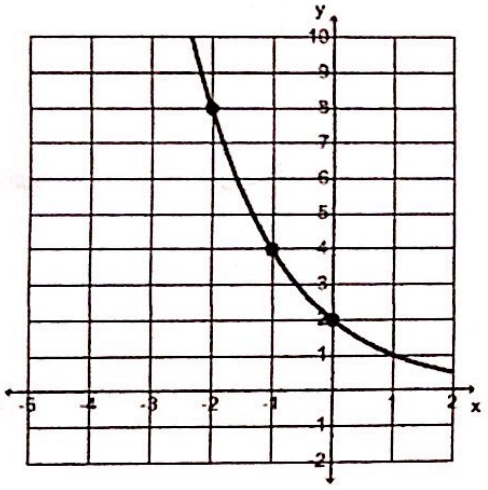


x	f(x)	
-1	2/3	
0	2	x 3
1	6	x 3
2	18	

This is exponential growth.

The domain is $(-\infty, \infty)$.

4) $f(x) = 2 \cdot \left(\frac{1}{2}\right)^x$

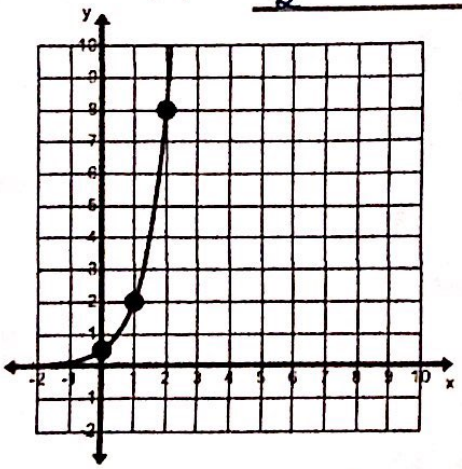


x	f(x)	
-2	8	÷2
-1	4	÷2
0	2	÷2
1	1	

This is exponential decay.

The asymptote is ~~$x=0$~~ $y=0$.

5) $f(x) = \frac{1}{2} \cdot 4^x$



x	f(x)
-1	1/8
0	1/2
1	2
2	8

This is exponential growth.

The range is $(0, \infty)$.