

**WARM UP**

Write an explicit equation from each of the tables. Write the equation in two equivalent forms.

1.

x	y
0	270
2	30
3	10
5	10/9

2.

x	y
2	80
3	320
4	1280
5	5120

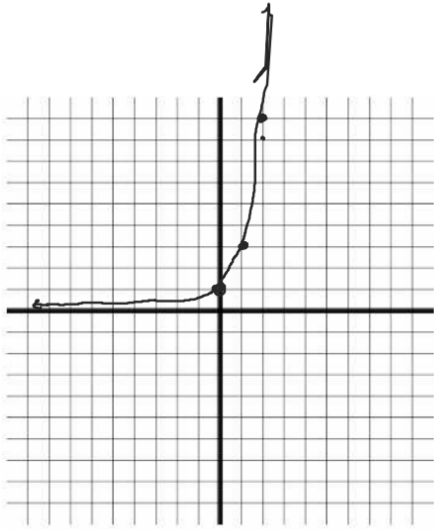
3.

x	y
0	100
1	50
2	25
3	12.5

**NOTES**

1.  $y = 3^x$

x	y	(x,y)
0	1	(0,1)
1	3	(1,3)
2	9	(2,9)
3	27	(3,27)



Steps for graphing an exponential from an equation

- 1- Push **[Y=]** and enter the equation
- 2- Push **[2ND]** **[TABLE]** \*graph\* 3-5 pts in table
- 3- Plot the points
- 4- Connect the Dots
- 5- Graph and Label the asymptote
- 6- Compare your graph to the calculator

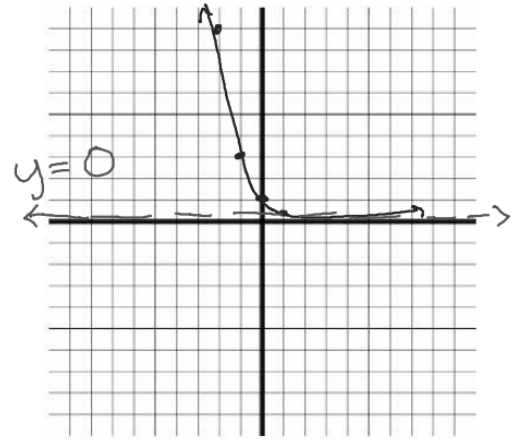
NOTE:

\* Variable button  $\rightarrow$  **[X,T,θ,n]**

\* No Fraction button  $\rightarrow$   $\frac{1}{2} = (1/2)$

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

x	y	(x,y)
-3	27	
-2	9	
-1	3	
0	1	

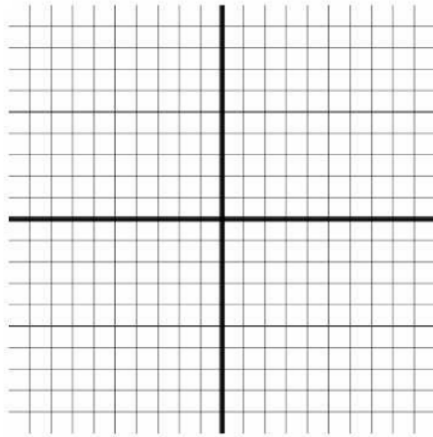


Asymptote: A line where your graph gets close to but never crosses.

\* graph using a dashed line  
 $\langle \text{-----} \rangle$

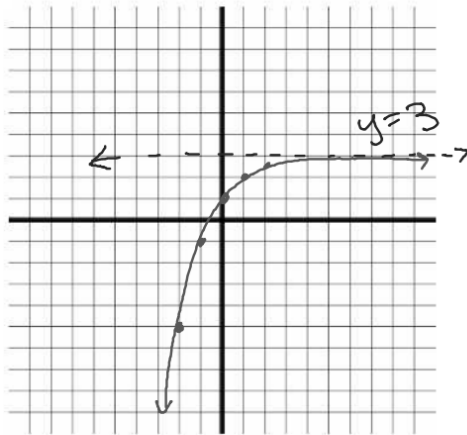
3.  $y = -2(4)^x$

$x$	$y$	$(x, y)$



4.  $y = -2(0.5)^x + 3$

$x$	$y$	$(x, y)$
-2	-5	
-1	-1	
0	1	
↑	2	



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