

Graphing Inverses of Exponentials

- I can graph an inverse of an exponential function

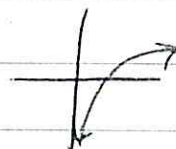
To graph, make your usual tables, the parent table, then your h, k table. Add a final table by switching your x's + y's. Graph the final table only.

Example

Graph the inverse of $y = 2(3)^{x-1} + 2$

				$f^{-1}(x)$		
x	$2(3)^x$	x+1	y+2	x	y	
-2	$2(3)^{-2} = 2(\frac{1}{9}) = \frac{2}{9}$	-1	$2\frac{2}{9}$	$2\frac{2}{9}$	-1	Switch x's + y's from previous table. Graph last table only.
-1	$2(3)^{-1} = 2(\frac{1}{3}) = \frac{2}{3}$	0	$2\frac{2}{3}$	$2\frac{2}{3}$	0	
0	$2(3)^0 = 2(1) = 2$	1	4	4	1	
1	$2(3)^1 = 6$	2	8	8	2	
2	$2(3)^2 = 2(9) = 18$	3	20	20	3	

Should get this shape



1. $y = 2(\frac{1}{2})^x + 1$
2. $y = 3(\frac{1}{3})^{x-2}$
3. $y = \frac{1}{2}(4)^x - 3$
4. $y = \frac{1}{3}(6)^{x+4}$
5. $y = \frac{1}{2}(\frac{1}{2})^{x+2} - 2$
6. $y = 4(\frac{1}{4})^{x-1} + 1$
7. $y = 8(2)^{x+4} - 10$
8. $y = \frac{1}{4}(4)^{x-2} + 4$

Graph each by following directions from above