



Activity 33


	A	B	C	D	E	F	
1	32	-1	0.001	-2	5	-4	
2	-4	5	16	10	-1	32	
3	3	$\frac{1}{8}$	1000	7	3	$\frac{1}{8}$	
4	$\frac{1}{4}$	25	8	9	$\frac{1}{4}$	25	
5	5	-4	0.001	-2	32	-1	
6	-1	32	16	10	-4	5	


On the grid, A is the graph of  $y = 2^x$ . B is the graph of  $x = 2^y$ .

Answer the following questions.

 In B, what is the value of  $x$  if  $y$  equals 3?


 In B, what is the value of  $x$  if  $y$  equals -2?


 In A, what is the value of  $y$  if  $x$  equals 4?


 In A, what is the value of  $y$  if  $x$  equals -3?


Solve for  $x$  in each equation.


  $\log_2 x = 5$


  $\log_5 x = 2$


  $\log_{\frac{1}{2}} 16 = x$

  $\log_{\frac{1}{2}} 4 = x$

  $\log_x 49 = 2$


  $\log_x 0.1 = -1$


  $\log_x 27 = \frac{3}{2}$

  $\log_{\frac{3}{4}} \frac{4}{3} = x$

  $\log_{10} x = 3$

  $\log_4 64 = x$

  $\log_x 125 = 3$

  $\log_{100} x = -\frac{3}{2}$

