

Introduction to Logarithms (Assignment 34)

Create two equations for each set of numbers: an exponential equation and a logarithmic equation.

1. 5, 125, 3

2. 13, 0, 1

3. $-3, -2, -\frac{1}{8}$

4. 512, 2, 9

5. 4, 64, 3

6. $\frac{1}{27}, 3, -3$

Rewrite each equation in logarithmic form.

7. $3^x = 243$

8. $2 = 4^a$

9. $w^p = 5$

10. $a = 7^{b+2}$

11. $9^{-5} = c$

12. $1.2^x = y$

Rewrite each equation in exponential form.

13. $\log_2 30 = x$

14. $\log_f 3 = 5$

15. $h = \log_2 1$

16. $\log_7 b = a$

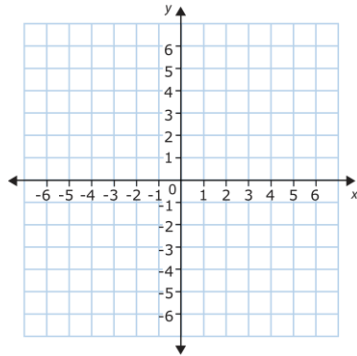
17. $4.5 = \log_2 s$

18. $\log_a b = c$

Make a table of values and graph each function.

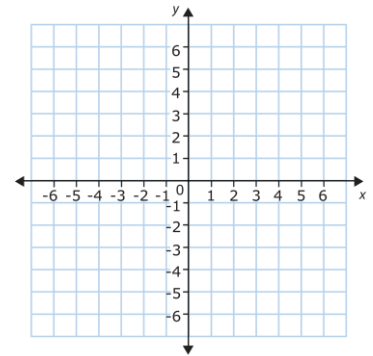
19. $f(x) = \log_2 x$

x	$f(x)$
$\frac{1}{4}$	
	-1
1	

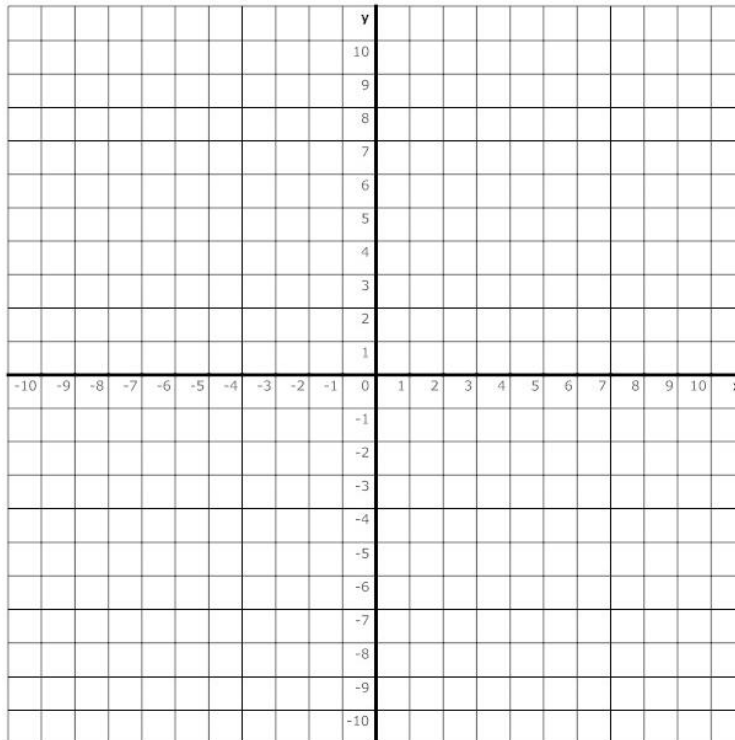


20. $g(x) = \log_{\frac{1}{2}} x$

x	$f(x)$



21. Plot three functions on the graph below: $h(x) = 3^x$, $h^{-1}(x) = \log_3 x$, and $\text{Id}(x) = x$. Make a table of values if helpful. The state the domain and range of h and h^{-1} below the graph.



Domain(h):

Range(h):

Domain(h^{-1}):

Range(h^{-1}):