

HAT 11/20/17
Graphing Logarithmic Functions

Name: _____

Warm Up:

Evaluate each expression:

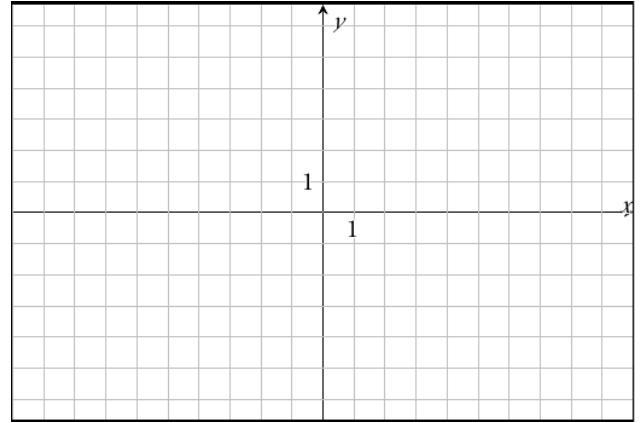
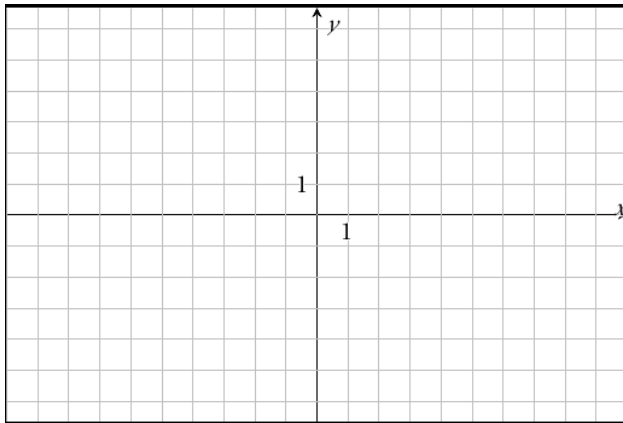
a. $\log_2 16$

b. $\log_3 \sqrt[5]{9}$

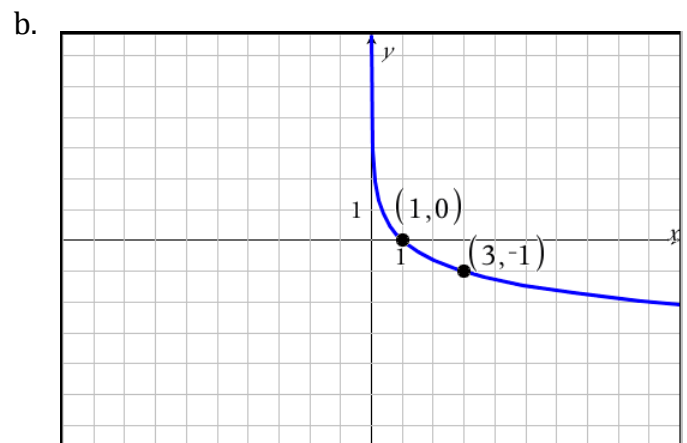
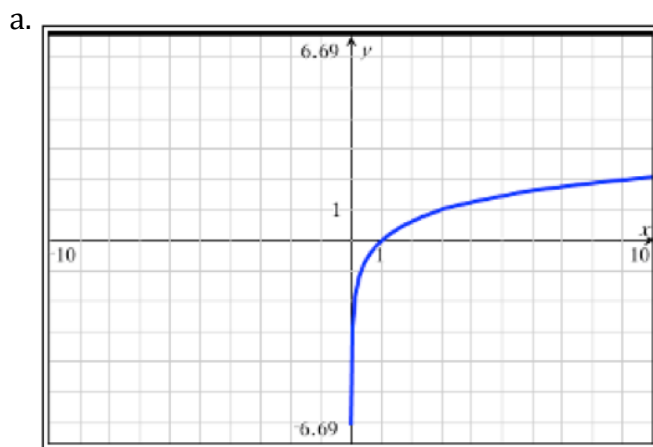
Graph each function with 3 accurate points.

a. $f(x) = \log_4 x$

b. $\log_{\frac{1}{2}} x$



Write the equation for each graph.

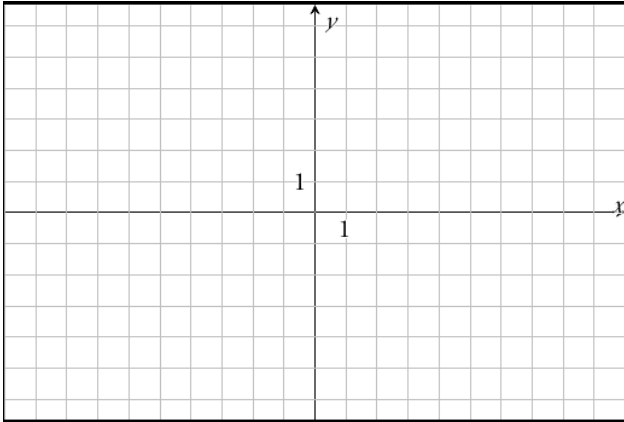


Transformations of Logarithmic Functions

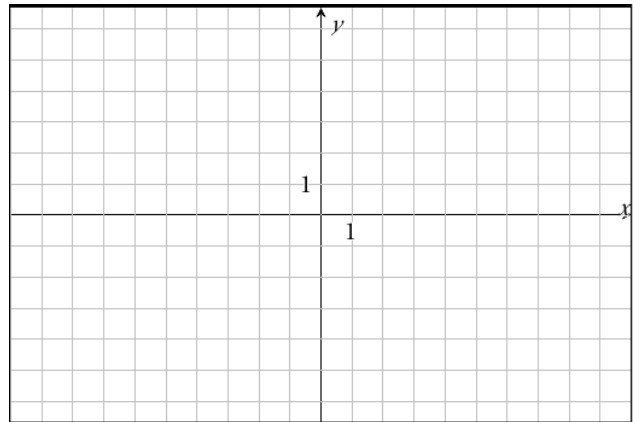
$$y = a \log_b(x-h) + k$$

EX #1: Graph each function.

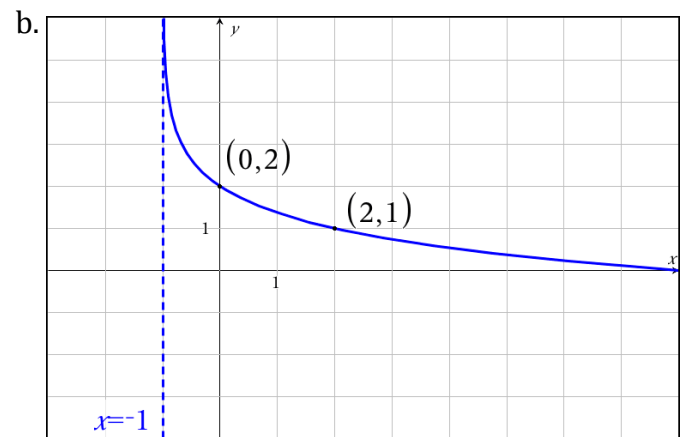
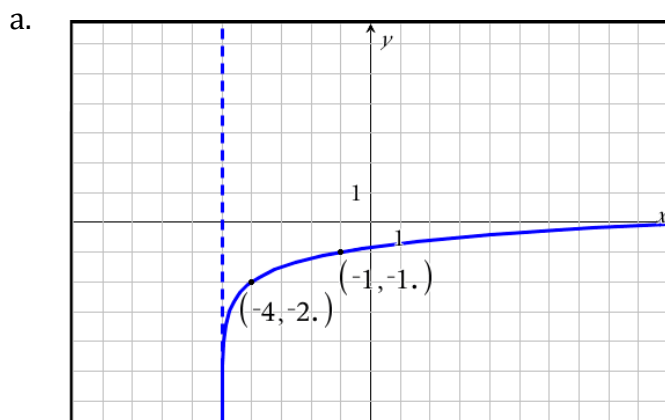
a. $f(x) = \log_6(x-4) + 1$



b. $f(x) = \log_{\frac{3}{4}}(x+2) - 3$



EX #2: Write an equation for each function.



EX #3: Solve.

a. $\log_2(x^2 - 6) = \log_2 5x$

b. $\log_4 x \geq 3$

c. $\log_5(2x+1) \leq 2$