Name: _____ Date: _____ IB Math A&A SL

Lesson 3.5 - Graphs of Logarithmic Equations

I. Warm-Up

1. Rewrite in exponential form. Solve for x. $0 = \log_3(x-2)$

2. Evaluate $\log_9(\sqrt{3})$

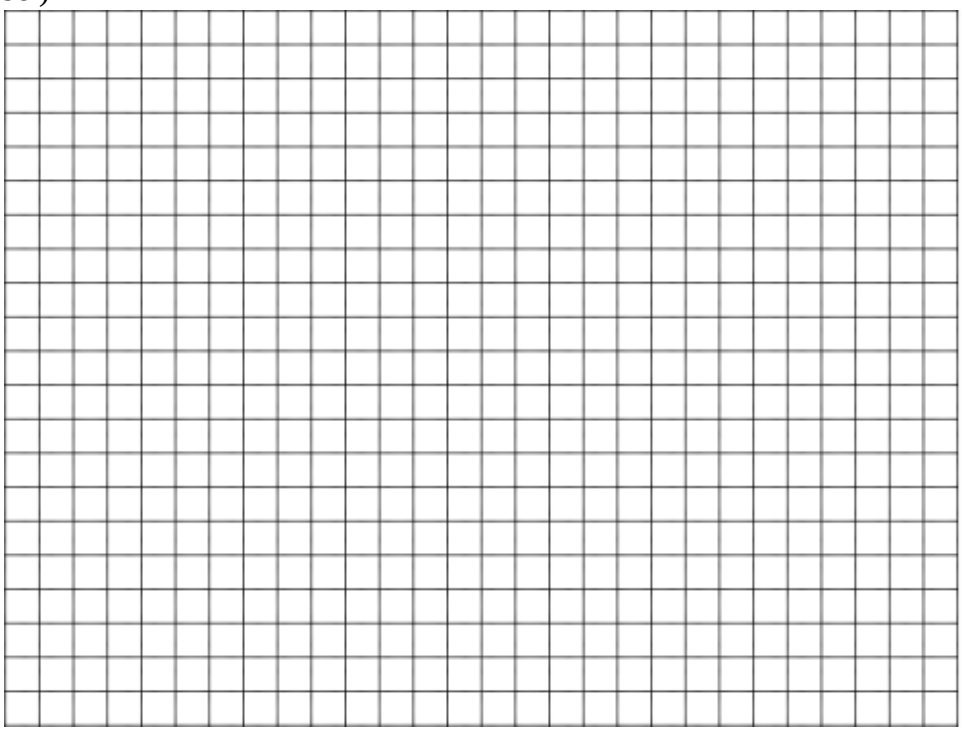
3. Graph (on the same axes & label)

a. $y = 2^x$

b. $y = 2^{-x}$

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

d. Inverse of part a.



Properties of Log Graphs:

II. Practice – For each of the functions find:

(a) The domain. (b). the vertical asymptotes (c). the intercepts

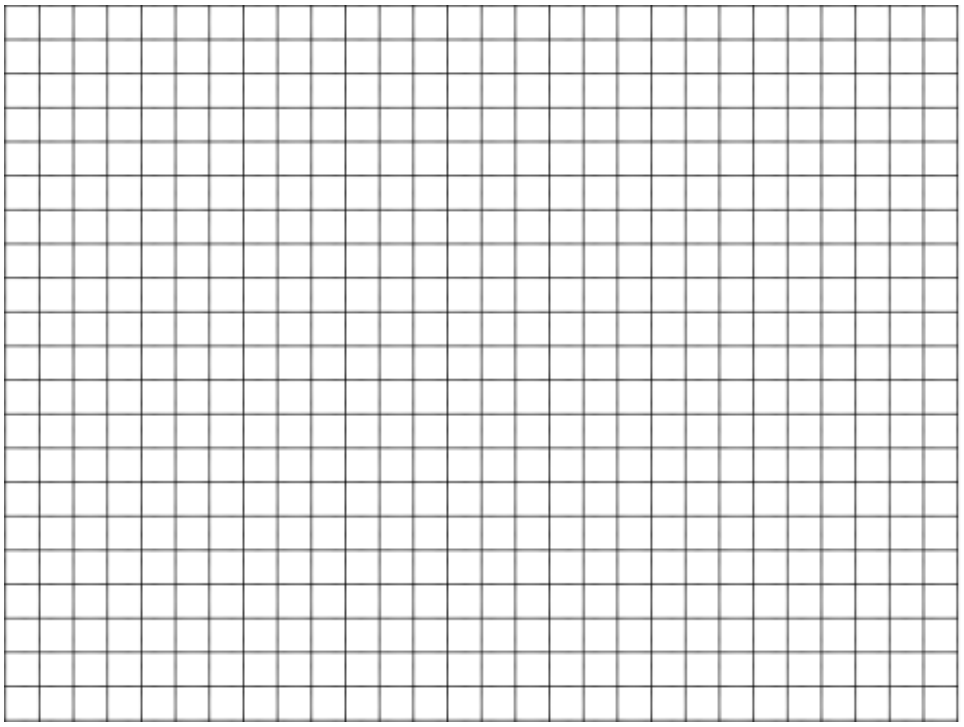
4. $f(x) = \log_6(x-1)$

5. $g(x) = \log_2(x+1) - 3$

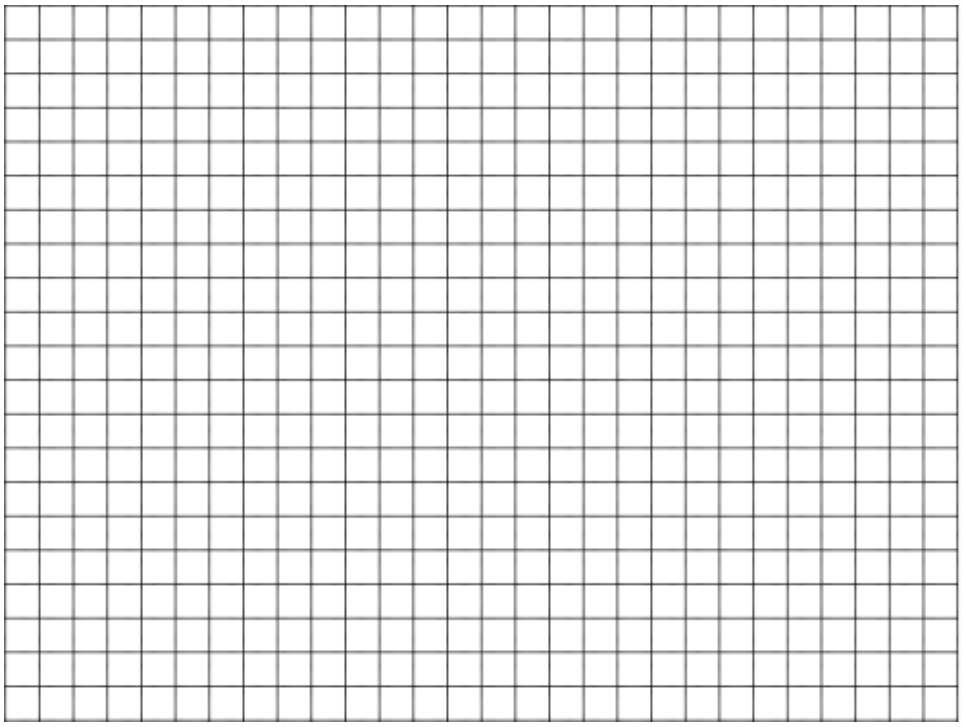
6. $h(x) = \log_3(-x+3) + 2$

Find the domain, vertical asymptotes, and intercepts for each function. Then sketch a graph.

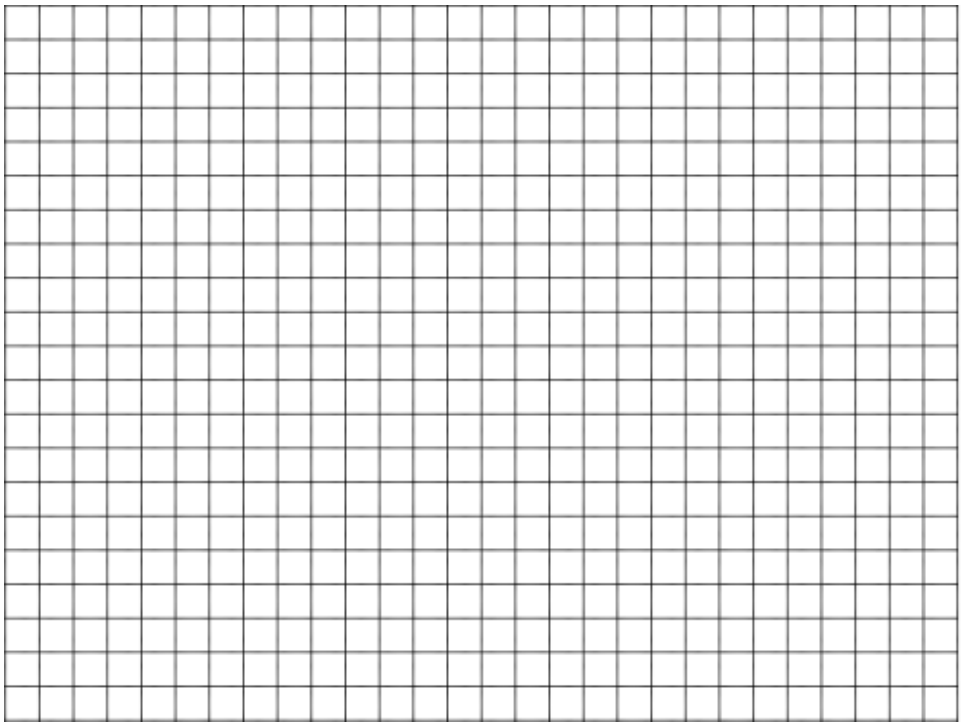
7. $f(x) = \log_3(1 - x)$



8. $f(x) = \log_4(x - 3) + 1$



9. $f(x) = -\ln(x+2)$



10. $f(x) = \ln(4-x)$