

Name: _____ Date: _____ Period: _____

6.3 Logarithmic Functions DAY ONE CYU

Use when you get it right all by yourself

S Use when you did it all by yourself, but made a silly mistake

H Use when you could do it alone with a little help from teacher or peer

G Use when you completed the problem in a group

X Use when a question was attempted but wrong (get help)

N Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Converting Logarithmic to Exponential	1 - 4		
Changing Exponential to Logarithmic	5 - 8		
Evaluating Logarithmic Expressions		9 - 14	
Solving Logarithmic equations			15 - 18
Graphing Exponentials & Logarithms		19 - 20	

Change the given equation from its current form to the form of its inverse.

1. $\log_5 x = y$

2. $\log_8 x = y$

3. $\log_a 4 = 5$

4. $\log_x b = -3$

5. $1.2^3 = m$

6. $e^b = 9$

7. $a^4 = 24$

8. $c = 10^k$

Evaluate the following logarithmic expressions. If necessary, use your calculator and round to the thousandths place.

9. $\log_2 1$

10. $\log_8 8$

11. $\log_2 8$

12. $\log \sqrt{10}$

13. $\log_{\frac{1}{3}} 9$

14. $\log 1000$

Solve for x in the following logarithmic equations. Leave your answer in fraction form. Remember "I HEART LOGS!"

15. $\log_{81} \frac{1}{27} = x$

16. $\log_{16} 64 = x$

17. $\log_5 x = -3$

18. $\log_{100} x = \frac{3}{2}$

Graph the following exponential functions and their inverses. Create a t-chart for both functions. Do not forget to label your functions and to graph your asymptotes. HINT: Those are inverses too.

19. $f(x) = \frac{1}{3}^x$

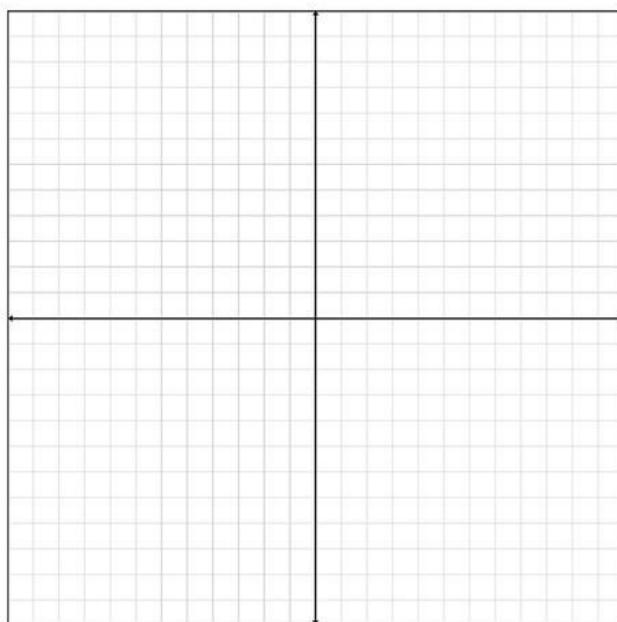
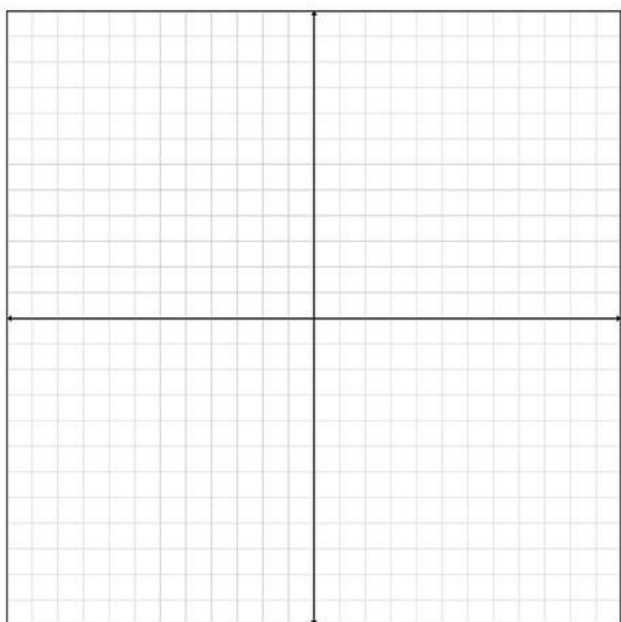
20. $g(x) = 4^x$

x	f(x)

x	f ⁻¹ (x)

x	g(x)

x	g ⁻¹ (x)



CYU Reflection: How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

