

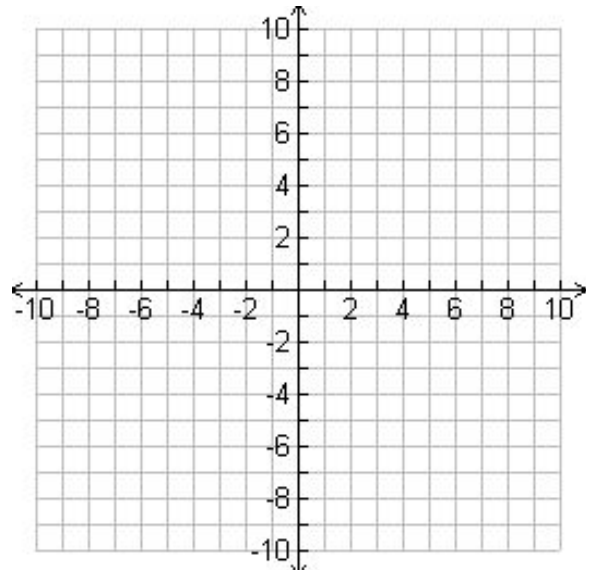
3.2 Logarithmic Functions Take Home Notes

Intro #1

Question: What's the inverse of an exponential function?

Graph $f(x) = 2^x$ and sketch what its inverse should look like:

Reminder Box
Inverses graphically are



Intro #2

Math Problem	Question	Math Answer	Procedure
$2 + x = 5$	Two plus what equals five?		
$3 \cdot x = 39$	Three times what equals 39?		
$x^3 = 27$	What cubed equals 27?		
$2^x = 512$	Two to the what equals 512?		

The answer to both #1 and #2 are _____.

Specific Examples

Logarithmic Form

Exponential Form

General Example

Logarithmic Form

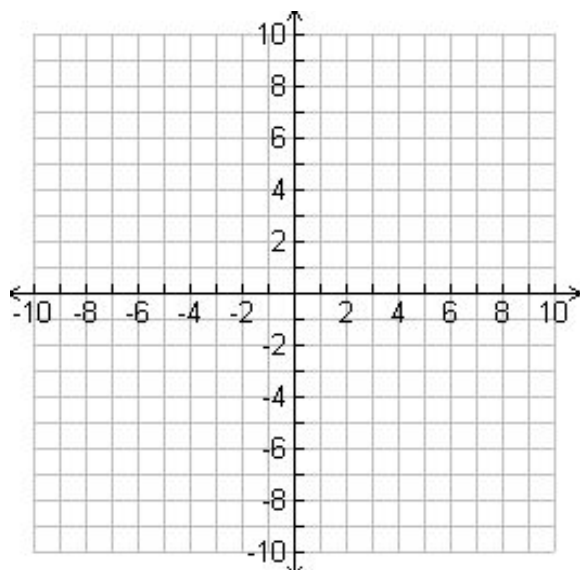
Exponential Form

Practice

Logarithm	In English	Evaluate
$\log_2 8$		
$\log_3 \frac{1}{9}$		
$\log_{10} 10,000$		
$\log_4 16$		
$\log_4 4$		
$\log_4 2$		
$\log_4 1$		
$\log_4 4^3$		
$\log_4 4^{15}$		
$\log_7 7^{12}$		

Graphs of Logarithmic Functions

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



$$g(x) = \log_2(x - 3) + 2$$

