

SECTION 6.3: LOGARITHMS AND LOGARITHMIC FUNCTIONS

Homework: _____

$$\log_b y = x$$

$$b^x = y$$

$$\log_{\text{base}} \text{answer} = \text{exponent}$$

Log Form	Exponential Form
	$5^3 = 125$
	$2^4 = 16$
	$10^3 = 1000$
$\log_3 81 = 4$	
$\log 100 = 2$	

Log Form	Exponential Form
	$5^{-2} = \frac{1}{25}$
	$3^{-3} = \frac{1}{27}$
$\log_2 \frac{1}{16} = -4$	
$\log_{36} 6 = \frac{1}{2}$	
	$125^{\frac{1}{3}} = 5$

To evaluate logarithms, you are determining the exponent value.

$$\log_{15} 15$$

$$\log_6 216$$

$$\log_5 \frac{1}{25}$$