

**DoThis 4.4 Solutions**

NAME:

1a.) In words, what does  $\log_3 27$  mean?

*the number to which I raise 3 to get 27*

b.) What is the numerical value of  $\log_3 27$ ?

*3 because  $3^3 = 27$*

2a.) In words, what does  $\log_4 \frac{1}{16}$  mean?

*the number to which I raise 4 to get  $\frac{1}{16}$*

b.) What is the numerical value of  $\log_4 \frac{1}{16}$ ?

*-2 because  $4^{-2} = \frac{1}{16}$  (You have to remember how negative exponents work.)*

3.) Write  $4 = 5^x$  as a logarithmic equation. (Recall  $x = 2^y$  is equivalent to  $y = \log_2 x$ .)

$$x = \log_5 4$$

*Look over the notes if you are having trouble with these problems.*