

**Math 0030    April 23, 2007    Homework 29**

Text problems: 12.2 # 3-45 odds

Definition of logarithm:  $\log_b a = c \quad \leftrightarrow \quad b^c = a$

1) Write in log form:  $3^x = 7$

2) Write in exponential form:  $\log_{10} z = 7$

Evaluate the following exactly:

3)  $\log_2 8 =$

4)  $\log_{10} 1000 =$

5)  $\log_3 \frac{1}{9} =$

6)  $\log_2 \sqrt[3]{2} =$

Solve for x:

7)  $\log_3 x = -1$

8)  $\log_5 x = 125$

9)  $\log_3 x = \frac{1}{2}$

10)  $\log_x 16 = 4$

12)  $\log_x \frac{1}{8} = -3$

13)  $\log_5 x = \frac{3}{2}$