 Name_____

The Change of Base Formula

Date_____ Period____

Use a calculator to approximate each to the nearest thousandth.

1) $\log_3 3.3$

2) $\log_2 30$

3) $\log_4 5$

4) $\log_2 2.1$

5) $\log 3.55$

6) $\log_6 13$

7) $\log_6 40$

8) $\log_4 3.5$

9) $\log_2 2.9$

10) $\log_6 22$

11) $\log_7 8.7$

12) $\log_3 62$

13) $\log_8 4$

14) $\ln 94$

15) $\log_2 8.7$

16) $\log_9 71$

17) $\log_{13} 194$

18) $\ln 14.1$

19) $\log_{13} 12.9$

20) $\log_5 10.818$

21) $\log_3 189$

22) $\log_{16} 194$

23) $\log_5 183$

24) $\log_{14} 2.6$

Critical thinking question:

25) Show that $\log_8 1000 = \log_2 10$ algebraically.

"Follow Me"

Solve for x:

) $9^x + 1 = 13$

$-1 \quad -1$

$9^x = 12$

$\log_9 12 = x$

$\frac{\log 12}{\log 9} = x$

$1.1309 \approx x$

Solve for x:

$7^x + 4 = 19$

) $\frac{6(1.03)^x}{6} = \frac{18}{6}$

$1.03^x = 3$

$\log_{1.03} 3 = x$

$\frac{\log 3}{\log 1.03} = x$

$37.167 = x$

$7(1.85)^x = 28$

$7^x - 4 = 19$

$8^x + 2 = 23$

$11(2.38)^x = 55$

$25(3.74)^x = 50$