PreCal Practice Test on KC 3 DATE:_____

Non Calculator

1) $Evaluate$: $-7\log 10^3 - 3$

2) *Evaluate:* $log_{17}17^{9/14}$

3) $Solve\ for\ m$: $\log_{\frac{1}{5}} \sqrt[3]{25}^5 = m$

4) $Solve\ for\ q$: $\frac{1}{16} = 2^{q-3}$

5) $Condense\ the\ expression$: $2\,[5\log(x+2) + \log x] - \log(x+4)$

6) Condense: $2\log_3 y + \log_3 z - \frac{1}{3}\log_3 x$

7) $Solve\ for\ w$: $\log_5(2w-3) = 2$

8) Solve: $ln15 - lnx = ln3$

9) $Solve\ for\ a$: $-4 = \log_a \frac{1}{16}$

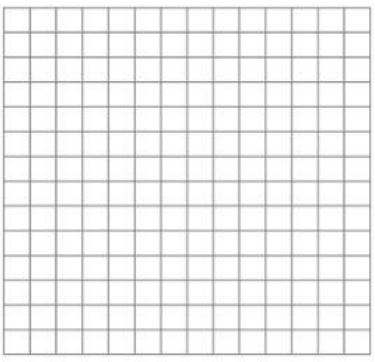
10) Solve: $\frac{e^x - 4e^{-x}}{3} = 1$

11) Solve: $\log(x-6)^2 = 4$

12) $Find\ the\ Domain,\ Range,\ X\&Y\ Intercepts,\ and\ Asymptotes\ of$:

$$f(x) = -1 + \log_5(x+3)$$

Graph the function. Label all parts



Calculator

13) $Solve\ for\ x\colon \ln(x+4)+\ln(x-3)=2\ln 3$

14) $Find\ the\ Domain\ \&\ Range\ of\colon f(x)=e^{x}+7$

15) Identify the domain, range, x&y intercepts, and any asymptotes for $3^{x+2}-1$

16) The # of bacteria in a petri dish after "t" hours is $B=100e^{kt}\ where\ t=0$ represents the time 12pm. At 6am the # of bacteria was 42.

a) Find "k"
b) Using "k", find the # of bacteria at 8pm.

17) The population of Wellsville can be represented by $P=1500e^{kt}$, t=0 is 2010. In 1990, the population was 1400. Find k and use this to predict the population in 2020.

18) You invest $1300 at Peter Venkman's savings and loan at 8% interest compounded continuously. How long will it take for the balance to double?