Math 3 – 2.5 Hw WS: Exp and Log Equations Name: _____

I. Solve each exponential equation. Keep answers as fraction, if not round to 3 decimal places. Must show ALL of YOUR WORK to RECEIVE CREDIT!!

1.) $2^{2x} = 3$	2.) $2^{2x-6} = 16$	3.) $4e^{x} - 1 = 11$	4.) $4 - 5^{x+7} = 1$
5.) $2e^{x-1} + 3 = -5$	6.) $2^{-x} - 4 = 5$	7.) $(e^{x} + 7)(e^{x} - 4) = 0$	8.) $2^{2x-7} \cdot 2^{4x+5} = 3$

II. Solve each logarithmic equation. Keep answers as fraction, if not round to 3 decimal places. Must show ALL of YOUR WORK to RECEIVE CREDIT!! CHECK YOUR SOLUTION(S)!

9.) $\log_6(4-2x) = \log_6(4x-2)$	10.) $\log_3(2-x) = 3$	11.) $2 + \ln(x-4) = 6$
12.) $\log(3x+5) = 2$	13.) $\log_5(x+1) - \log_5(x-1) = \log_5(6)$	14.) $2\log x = \log 2 + \log(3x-4)$
15.) $\ln(5x-3) = \ln(x-1)$	16.) $\log_4(8x) + \log_4(x) = 3$	17.) $\ln(x+2) - \ln(x-2) = 1$
18.) $\log_2(x-3) + \log_2(x-4) = 1$	19.) $\log_7(x-2) - \log_7(x-6) = 2$	20.) $\ln(1-3x) + \ln 8 = 4$