Name: _ 8:00

9:30 or

- **1.** Approximate by using the change of base formula. Include at least 3 decimals in your answer.
 - a) $\log_8(63) \approx$
 - b) $\log_5(17) \approx$
 - c) $\log_{23}(11) \approx$
 - d) $\log_{6.6}(66) \approx$
 - e) $\log_{0.5}(3) \approx$
- **2.** Solve the equation

 $4^{5x+13} = 6^{7-8x}$

3. Solve the equation

$$(e^x)^2 - 8e^x + \frac{48}{4} = 0$$

4. Solve the compound interest formula for t using only natural logarithms:

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

5. Solve the equation

$$e^x - 40e^{-x} = -6$$