1)
$$-8e^{k-10} = -33$$

 $e^{k-10} = -\frac{33}{-8}$
 $\ln e^{k-10} = \ln(\frac{33}{8})$
 $k-10 = \ln(\frac{33}{8})$
 $k = 10 + \ln(\frac{33}{8})$
 $k = 11, 4171$
 $(n(\frac{33}{8})r 10)$

2)
$$-9e^x = -64$$

 $e^x = -\frac{64}{-9}$
 $x = 1\sqrt{\frac{64}{9}} = 1.5617$

3)
$$9e^{7n-7} = 3$$

 $e^{7n-7} = \frac{1}{3}$
 $7n-7 = 1n^{1/3}$
 $7n = 7 + 1n^{1/3}$
 $n = \frac{7 + 1n^{1/3}}{7} = 0.8431$

4)
$$-9e^{8a-10} - 1 = -21$$

 $-9e^{8a-10} = -20$
 $e^{8a-10} = \frac{29}{9}$
 $8a - (0 = \ln(\frac{10}{9}))$
 $8a = 10 + \ln(\frac{20}{9})$
 $a = \frac{10 + \ln(\frac{20}{9})}{8}$
 $a = 1.3 + 98$

5)
$$\ln 9 + \ln (x+3)^{l} = \ln 36$$

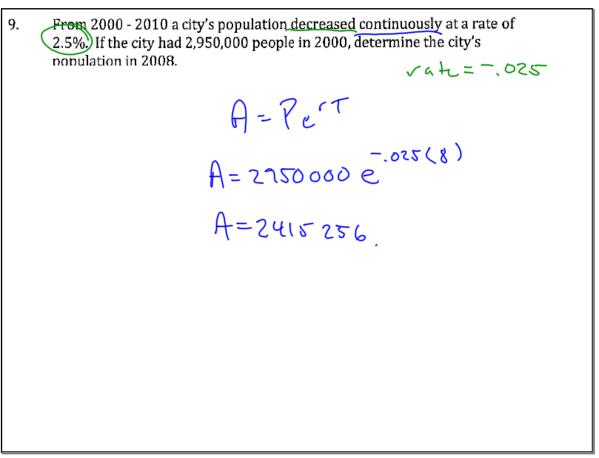
 $\ln (9(x+3)) = \ln 36$
 $q(x+3) = 36$
 $qx + 27 = 36$
 $qx = 9$
 $x = 1$

6)
$$\ln(x^2 - 9) - \ln 4 = 4$$

 $\ln\left(\frac{x^2 - 9}{4}\right) = 4$
 $e^{-\frac{x^2 - 9}{4}} = e^{-\frac{x^2}{4}}$
 $\frac{x^2 - 9}{4} = 4e^{-\frac{x^2}{4}}$
 $\frac{x^2}{4} = 9 + 4e^{-\frac{x^2}{4}}$
 $x = \frac{1}{4}\sqrt{9 + 4e^{-\frac{x^2}{4}}}$
 $x = \frac{1}{4}\sqrt{9 + 4e^{-\frac{x^2}{4}}}$
 $x = \frac{1}{4}\sqrt{9 + 4e^{-\frac{x^2}{4}}}$

7) Abhasra invests \$1,162 in a retirement
account with a fixed annual interest rate
compounded 6 times per year. After 15
years, the balance reaches \$2,858.02.
What is the interest rate of the account?
$$A = P((1+\frac{1}{2})^{nT})$$
(6×15)
2858.02 = 1162(1+\frac{1}{2})(6×15)
90/2-4596 = 90((1+\frac{1}{2})^{70})(6.0376)
(.0161 = 1 + % (6x²))
0.0101 = 1 + % (6x²)
0.0101 = 1 + % (6x²)

8) Krystal invests \$7,442 in a savings
account with a fixed annual interest rate
compounded continuously. After 7 years,
the balance reaches \$13,147.61. What is
the interest rate of the account?
$$A = P e^{r}$$



10. Your new computer cost \$1500 but it depreciates at a rate of about 18%. When will the computer first be worth less than \$500?

$$A = P (1 + f)^{nT}$$

$$Sod = 1500 (1 + f)^{(1)}$$

$$\frac{1}{3} = (0.82)^{T}$$

$$\log_{.82}(\frac{1}{3}) = T$$

$$\log_{.82}(\frac{1}{3}) =$$