

Math: 112

Quiz #3

Solve the following equations for the variable x :

3 1. $\ln(x+2) - \ln(x) = \ln(7)$.

$$\ln\left(\frac{x+2}{x}\right) = \ln(7)$$

$$\Rightarrow x+2 = 7x$$

$$\Rightarrow x = \frac{1}{3}$$

4 2. $A(.83)^x = Bb^x$.

$$\ln(A) + x\ln(.83) = \ln(B) + x\ln(b)$$

$$\Rightarrow \frac{\ln(A) - \ln(B)}{\ln(b) - \ln(.83)} = x$$

3 3. $4xe^x - 3e^x = 0$.

$$e^x(4x-1) = 0$$

$$x = \frac{1}{4}$$