

I don't know what your answer is -5 for messy!

$$\frac{1}{2} \log \left(\frac{\log(x+1)}{\log(2)} \right) - \log(x+1) = \log(3)$$

5. (6 points) Use the properties of logarithms to expand the following expression as far as possible:

$$X + \log(3) = 2.5$$

$$X + \log(3) = 2.5 - 1$$

$$X + 1 \log(3) = \frac{1.5}{2}$$

$$\frac{2}{2} (X+1) \log(3) = \frac{1.5}{2}$$

-4

$$X = 0.369$$

b. $2(3^{x+1}) = 5$

$$2 = X$$

$$10 = X+1$$

$$\log(x+1) = 2$$

-4

4. (12 points) Solve the following equations exactly for x.

a. $\log(x+1) + 5 = 2$

no calc