Math 1513 - College Algebra

Week 13 Discussion Board Questions

Solve each of the following functions for x, do not express your answers in terms of decimals, leave your answers as exact values.

1.
$$\ln(5x) - \ln(2x-1) = \ln(4)$$

2.
$$e^{3x-1} + e^2 = e^{-2x-1}$$

3.
$$\log(x) = \sqrt{\log(x)}$$

4.
$$\log_2(x+25) = 1 - \log_2(2x-7)$$

5.
$$\ln(x+25) = -2 - \ln(2x-7)$$

6.
$$2^{4x-5} = 3 \cdot 2^{3x-7}$$

7.
$$e^{4x-5} = 3 \cdot \left(\frac{1}{e}\right)^{-3x+7}$$

8.
$$e^{4x-5}e^{-2x+8} = 3 \cdot e^{-3x+7}$$

9.
$$\log(x) + \log(3x-13) = 1$$

10.
$$\log_2(x) + \log_2(3x-13) = 2$$

11.
$$\log(x^2) = (\log(x))^2$$

12.
$$\log_3(\log_3(x)) = 1$$

13.
$$\log_{\frac{1}{3}}(\log_{\frac{1}{3}}(x)) = -1$$

14.
$$4^{2x-7} = 2^{3x+5}$$

15.
$$4^{2x-7} = 32^{3x+3}$$