

# Math 1513 - College Algebra

## Discussion Board Week 7 - Due 2012.07.21

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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.

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