8. [13 points] Solve the following equations algebraically. Your solutions should be in **exact form**. Show all your work to receive full credit.

    a. [4 points] $\log(2x) - \log(2x+1) = 3$.

$x =$ _____

    b. [4 points] $\ln(6e^{2x} - 8) = 2x$

$x =$ _____

    c. [5 points] $1.3(10^x) = (3.4)^{3x}$

$x =$ _____