7. [12 points] Solve for x the following equations algebraically. Show all your work step by step and write your answers in **exact form** to receive full credit.

    a. [4 points] $4(10^{2\log(x)+1}) = 3$

$$x = \underline{\hspace{5in}}$$

    b. [4 points] In this problem k is a constant, hence your answer may depend on k.

$$e^{kx} = 2e^{x+2}$$

$$x = \underline{\hspace{5in}}$$

    c. [4 points] $\log(100x) = 2 + 2\log(x^2)$

$$x = \underline{\hspace{5in}}$$