

7. [11 points] In each of the following parts, you are given an equation in which you must solve for x . Your answers must be **exact** and should be obtained *algebraically*. You should **show all your work, step-by-step**, and write your final answers *in the spaces provided*.

a. [3 points] $\ln(3x^7 + 5) = -2$

$$x = \underline{\hspace{10cm}}$$

b. [4 points] $e^{7x} = 5e^{10x}$

$$x = \underline{\hspace{10cm}}$$

c. [4 points] $4(\log(ax))^3 + 8 = 0$, where $a > 0$ is a constant. Your answer for this part may involve a .

$$x = \underline{\hspace{10cm}}$$