Problem 26.46

We know that $C = \kappa \varepsilon_o \dfrac{A}{d}$,

so

$$C = \kappa \varepsilon_o \frac{A}{d}$$

area

$$\Rightarrow \quad \left(9.50 \text{x} 10^{-8} \text{ F}\right) = \frac{3.7 \left(8.85 \text{x} 10^{-12} \text{ F/m}\right)\left[\left(7.00 \text{x} 10^{-2} \text{ m}\right)L\right]}{\left(2.50 \text{x} 10^{-5} \text{m}\right)}$$

$$\Rightarrow \quad L = 1.04 \text{ m}$$