1.100 An open, clean glass tube, having a diameter of 3 mm, is inserted vertically into a dish of mercury at 20 °C. How far will the column of mercury in the tube be depressed?

$$h = \frac{2\sigma \cos\theta}{\gamma R} \qquad\qquad (Eq.\ 1.22)$$

For $\theta = 130°$,

$$h = \frac{2\left(4.66 \times 10^{-1}\ \frac{N}{m}\right) \cos 130°}{\left(133 \times 10^{3}\ \frac{N}{m^3}\right)\left(0.0015\ m\right)} = -3.00 \times 10^{-3}\ m$$

Thus, column will be depressed   <u>3.00 mm</u>