79. Using Eq. 30-22 and Eq. 30-19, we have

$$|\vec{B}_1| = \left(\frac{\mu_0\, i}{2\pi\, R^2}\right) r_1$$
$$|\vec{B}_2| = \frac{\mu_0\, i}{2\pi\, r_2}$$

where $r_1 = 0.0040$ m, $|\vec{B}_1| = 2.8 \times 10^{-4}$ T, $r_2 = 0.010$ m and $|\vec{B}_2| = 2.0 \times 10^{-4}$ T. Point 2 is known to be external to the wire since $|\vec{B}_2| < |\vec{B}_1|$. From the second equation, we find $i = 10$ A. Plugging this into the first equation yields $R = 5.3 \times 10^{-3}$ m.