

69. Since the radius is $R = 0.0013$ m, then the $i = 50$ A produces

$$B = \frac{\mu_0 i}{2\pi R} = 0.0077 \text{ T}$$

at the edge of the wire. The three equations, Eq. 30-6, Eq. 30-19 and Eq. 30-22, agree at this point.