

48. From $\mu = NiA = i\pi r^2$ we get

$$i = \frac{\mu}{\pi r^2} = \frac{8.00 \times 10^{22} \text{ J/T}}{\pi(3500 \times 10^3 \text{ m})^2} = 2.08 \times 10^9 \text{ A} .$$