

P#0

Ch. 19

$$B = 3.4 \times 10^{-4} \text{ T}$$

$$r = .50 \text{ cm} = .005 \text{ m}$$

$$\mu_0 = 4\pi \times 10^{-7} \text{ T}\cdot\text{m/A}$$

$$B = \frac{\mu_0 \cdot I}{2\pi r} \quad \text{so} \quad (3.4 \times 10^{-4} \text{ T}) = \frac{(4\pi \times 10^{-7} \text{ T}\cdot\text{m/A})(I)}{(2\pi) \cdot (.005 \text{ m})}$$

$$I = 8.5 \text{ A}$$