27.) $B = \frac{\mu_0 I}{2\pi}$ $\quad r = \frac{mv}{qB}$

$$T = \frac{2\pi r}{v} = \frac{2\pi m}{qB}$$

$$B = \frac{2\pi m}{qT} = \frac{2\pi m_p}{e \cdot 1\mu s} = \underline{0.066\ T}$$

37) $B = \frac{\mu_0 I}{2\pi r} \rightarrow r = \frac{\mu_0 I}{2\pi B}$

$$r = \frac{4\pi \times 10^{-7} \frac{N}{A^2}\ 20A}{2\pi \cdot 1.7mT} = 0.0024\ m \quad \underline{\sim 2.4\ mm}$$