

$$B = 2.00 \text{ T}$$

$$l = 1.00 \text{ m}$$

$$m = 50.0 \text{ g} = .050 \text{ kg}$$

$$\text{Assume } \theta = 90^\circ$$

$$F_B = W = m \cdot g = (.050 \text{ kg})(9.8 \text{ m/s}^2)$$

$$F_B = .49 \text{ N}$$

$$F_B = B \cdot I \cdot l$$

$$(.49 \text{ N}) = (2.0 \text{ T}) \cdot I \cdot (1.00 \text{ m})$$

$$I = .245 \text{ A}$$