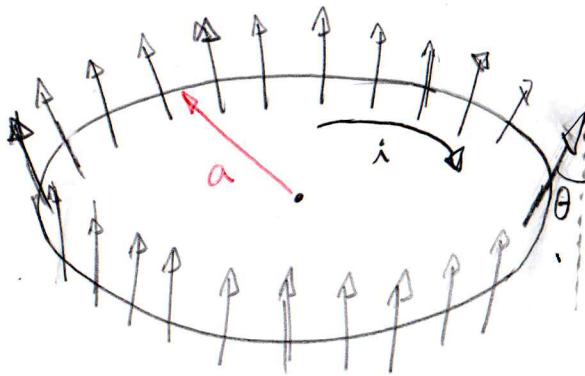


Cap 28 Ex 49



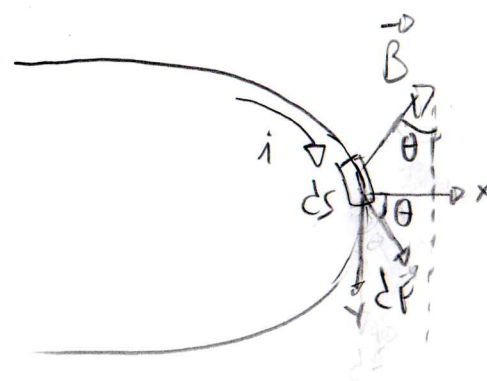
$$a = 1,8 \text{ cm}$$

$$\theta = 20^\circ$$

$$B = 3,4 \text{ mT}$$

$$i = 4,6 \text{ mA}$$

Det. $|\vec{F}|$ que \vec{B} exerce sobre a espira.



$$dF = i B ds$$

$$dF_x = (i B \cos \theta) ds$$

$$dF_y = (i B \sin \theta) ds$$

$F_x \rightarrow$ cancelamento por simetria radial

$$F_y = \int dF_y = \int i B \sin \theta ds$$

i, B e $\theta \rightarrow$ cte, logo

$$F_y = i B \sin \theta \int ds$$

$$F_y = i B \sin \theta \cdot 2\pi a$$

$$F_y = 2\pi \cdot 4,6 \cdot 10^{-3} \cdot 3,4 \cdot 10^{-3} \cdot \sin(20^\circ) \cdot 0,018$$

$$F_y = 6,1 \cdot 10^{-7} \text{ N}$$