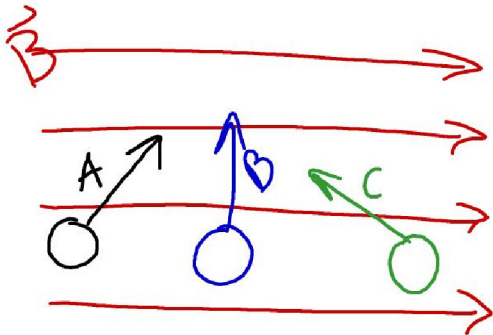


679 P5

$$q = +8.4 \mu\text{C}$$

$$v = 45 \frac{\text{m}}{\text{s}}$$

$$\vec{B} = 0.3 \text{ T}$$



$$A) F = qvB \sin \theta$$

$$= (8.4 \times 10^{-6}) (45) (0.3) \sin 30^\circ$$

$$= (1.134 \times 10^{-4}) (0.5)$$

$$|F_A| = 5.67 \times 10^{-5} \text{ N}$$

Direction (Into the page) - All

$$B) F = qvB \sin 90$$

$$= 1.134 \times 10^{-4} \text{ N}$$

P1

$$\vec{B} = 2.5 \times 10^{-5} \text{ T south}$$

$$+q = 1.6 \times 10^{-19} \text{ C}$$

moves east

$$v = ?$$

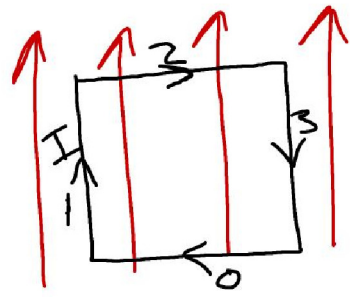
$$F_B = F_g$$

$$qvB = m_p g$$

$$(1.6 \times 10^{-19}) v (2.5 \times 10^{-5}) = (1.67 \times 10^{-27}) (10 \frac{\text{m}}{\text{s}^2})$$

(29)

$B = 0.25 \text{ T}$   
 $l = 0.32 \text{ m}$   
 $I = 12 \text{ A}$   
 $F_B = ?$



$$F_0 = B I l$$
$$= (0.25)(12)(.32)$$
$$\approx 0.96 \text{ N}$$

$\hookrightarrow F_2 = F_0$

$F_1 = F_3 = 0$  b/c they are parallel to the field.

$$F = B I l \sin \theta \leftarrow \theta = 0$$

