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Chapter 22 #2, 7, 13, 26, 31, 37 Alex Kech

2) a) right b) out \odot c) down d) none e) left f) up

7) $F = qvB = 0.1e-6 \cdot 5 \cdot 1.5 = 7.5e-7 \text{ N}$

13) $qLvB \sin \theta = m \frac{v^2}{r}$

$$B = \frac{mv^2}{qLv \sin \theta} = \frac{mv}{qL \sin \theta} = \frac{1.67e-27 \cdot 7.5e7}{1.6e-19 \cdot 0.8 \cdot \sin(90)} = 0.98 \text{ T}$$

31) a) left b) in \otimes c) up d) none e) right f) down

37) $F = ILB \sin(\theta)$, $B = \frac{F}{IL \sin \theta} = \frac{2.16}{30.4e-2 \cdot \sin(90)} = 1.8 \text{ T}$

26) $V = Blv = 1.5 \cdot 0.075 \cdot 0.1 = 0.01125 \text{ V}$