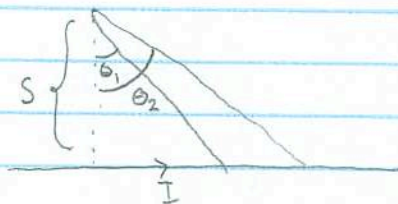
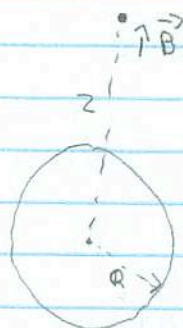


1)



$$B = \frac{\mu_0 I}{4\pi r} (\sin \theta_2 - \sin \theta_1)$$

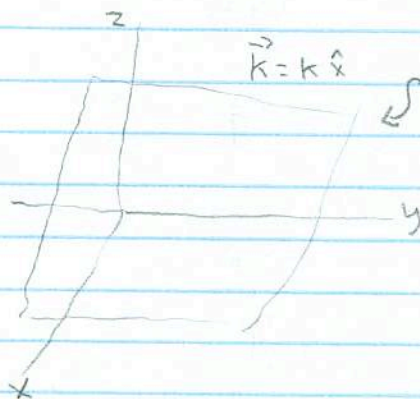
2)



$$B = \frac{\mu_0 I}{2} \frac{R^2}{(R^2 + z^2)^{3/2}}$$

3) Solenoid: $\vec{B} = \begin{cases} \mu_0 n I \hat{z} & \text{inside} \\ 0 & \text{outside} \end{cases}$

4.



$\vec{E} = E \hat{x}$ Sheet of charge

$$\vec{E} = \begin{cases} (+\mu_0/2) k \hat{y} & z < 0 \\ -(\mu_0/2) k \hat{y} & z > 0 \end{cases}$$