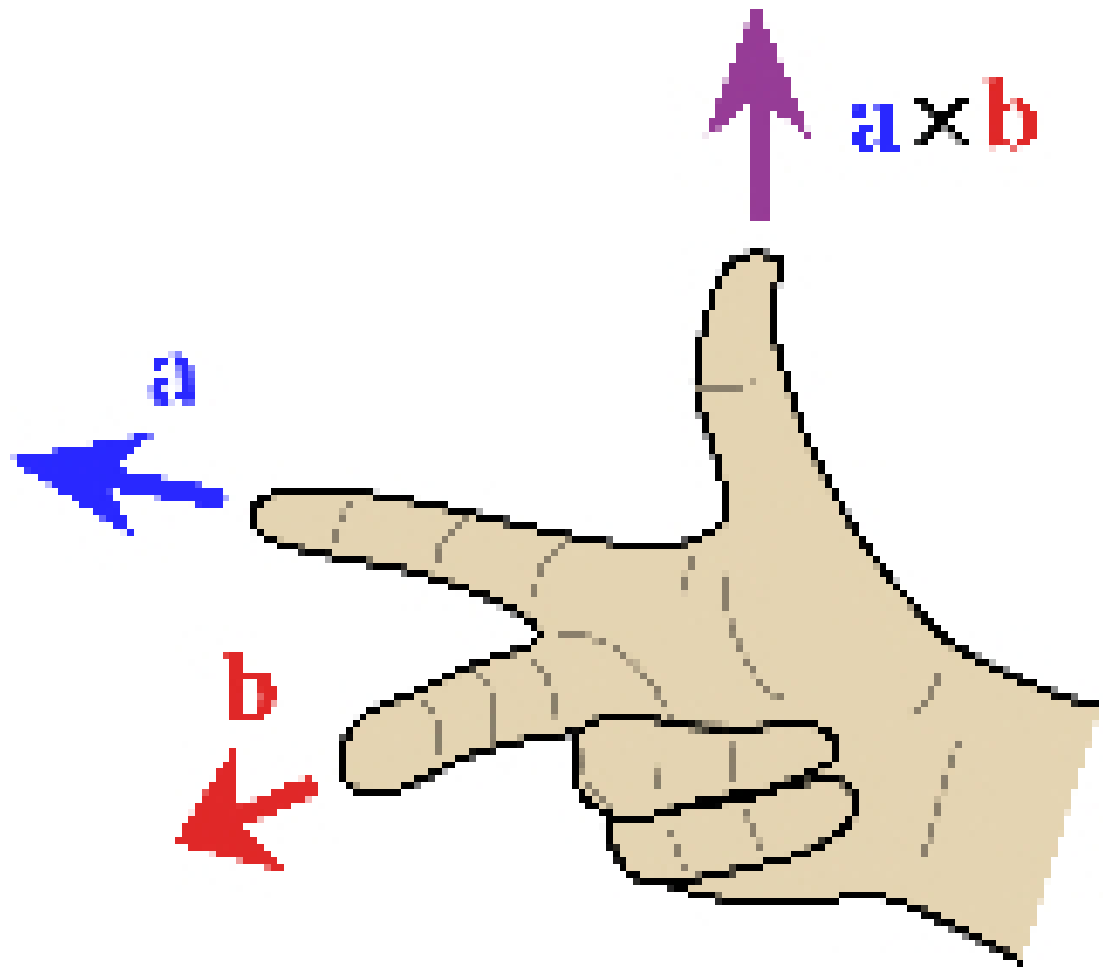
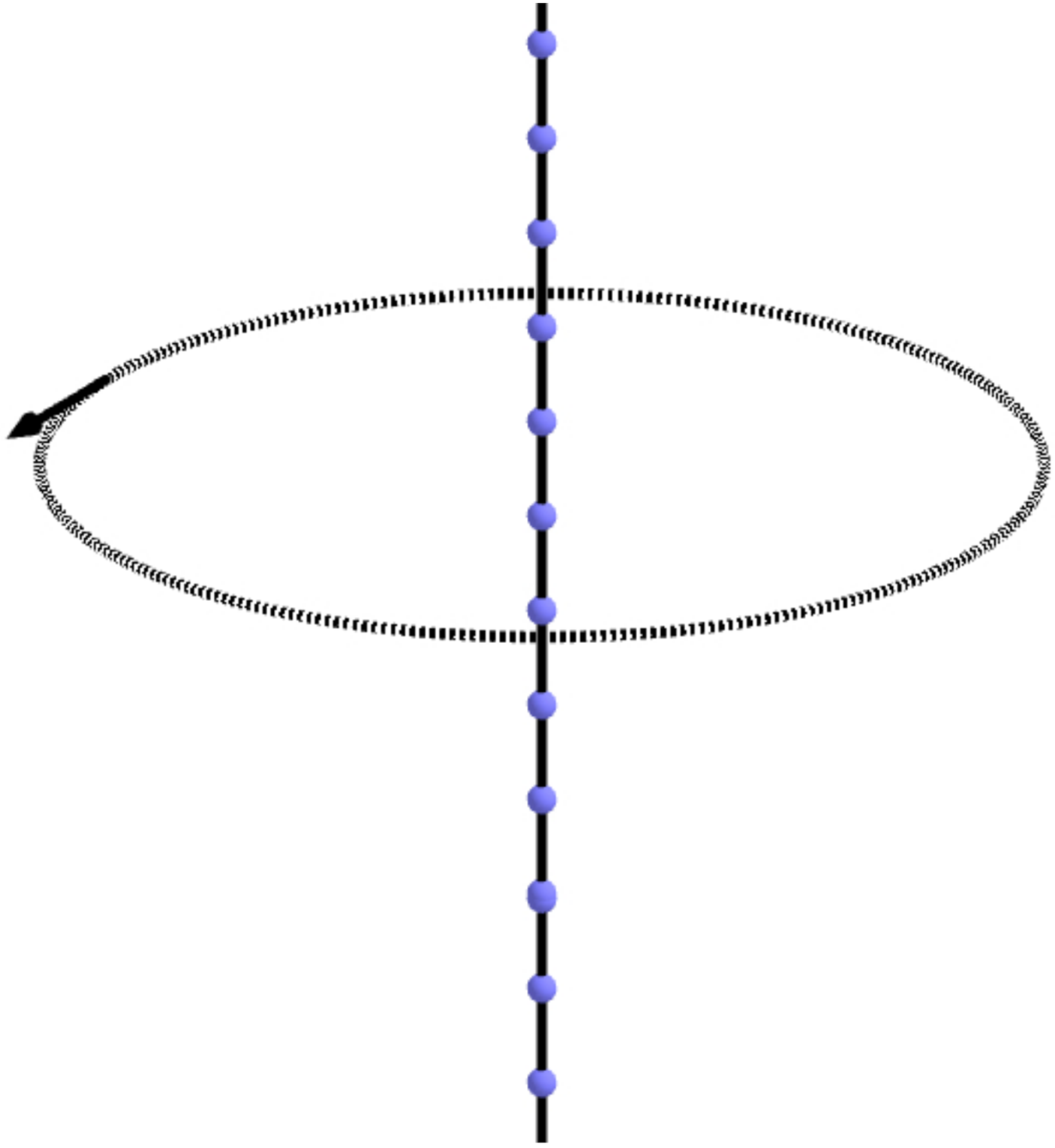

a × b
a
b

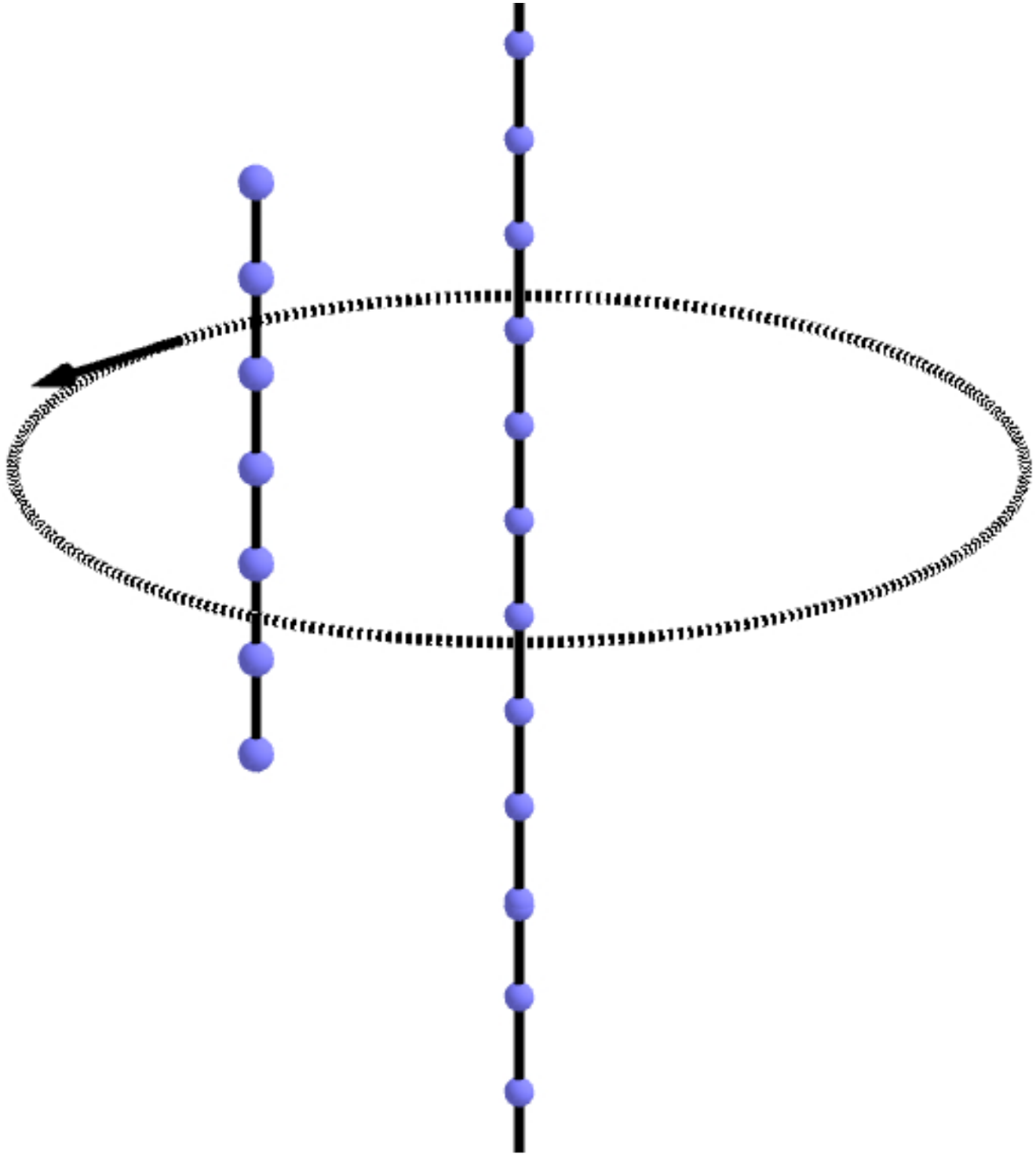
$$\vec{B}_{(r)\hat{\theta}} = \frac{I}{r}$$



$$\vec{B}_{(r)\hat{\theta}} = \frac{I}{r}$$

$$I = \frac{dq}{dt} = \frac{dq}{dy}\frac{dy}{dt}$$

$$I = \lambda v$$

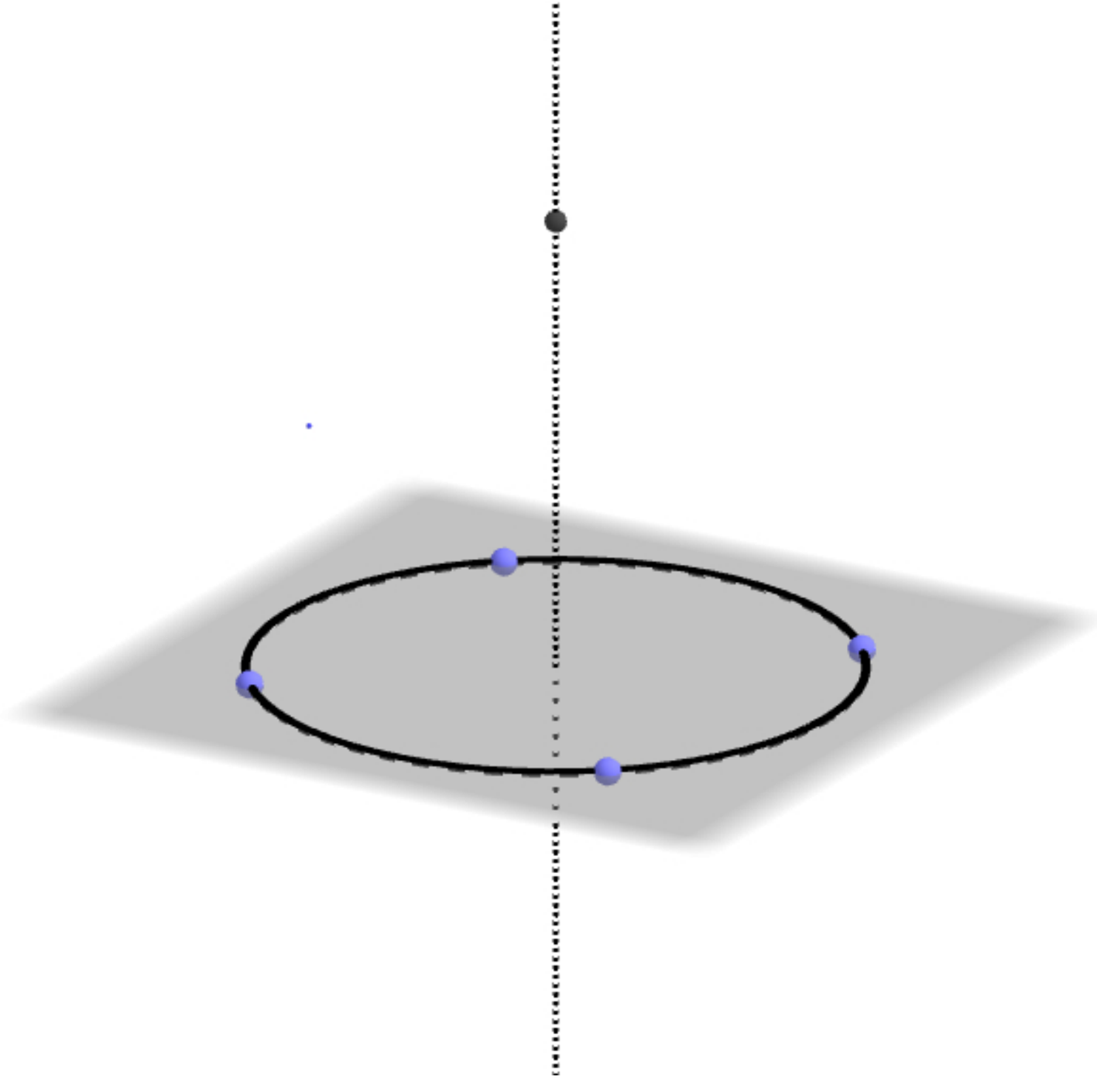


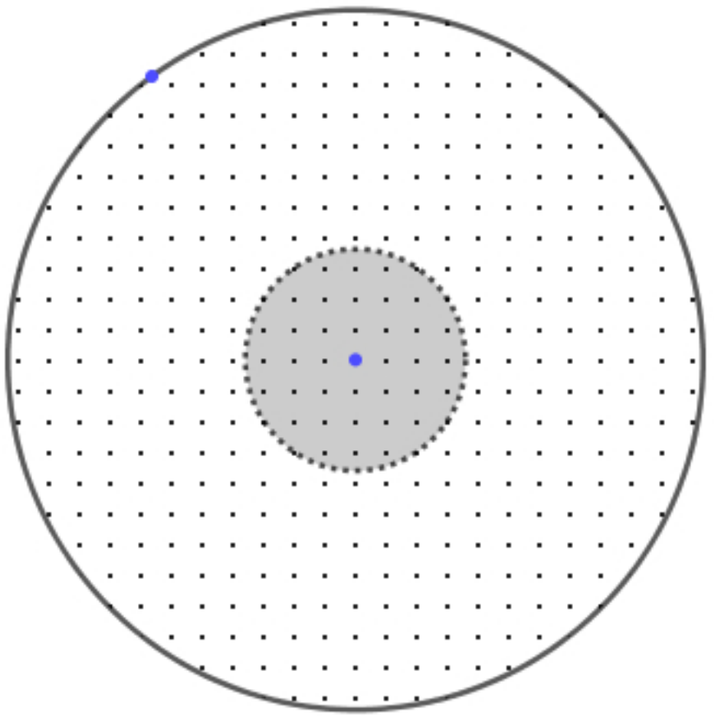
$$\vec{B}_{(z,R)}\hat{z} = I\frac{R^2}{(z^2+R^2)^{\frac{3}{2}}}\hat{z}$$

$$\vec{B}_{(0,R)}\hat{z} = \frac{I}{R}\hat{z}$$

$$\vec{I} = \frac{dq}{dt} = \lambda \cdot v = \frac{q}{2\pi R}\omega R$$

$$\vec{I}_{(\not{r})} = q\omega$$





$$\vec{B}_{(r)\hat{\theta}} = I \cdot \frac{1}{r} \qquad j_0 = \frac{I}{\pi R^2}$$

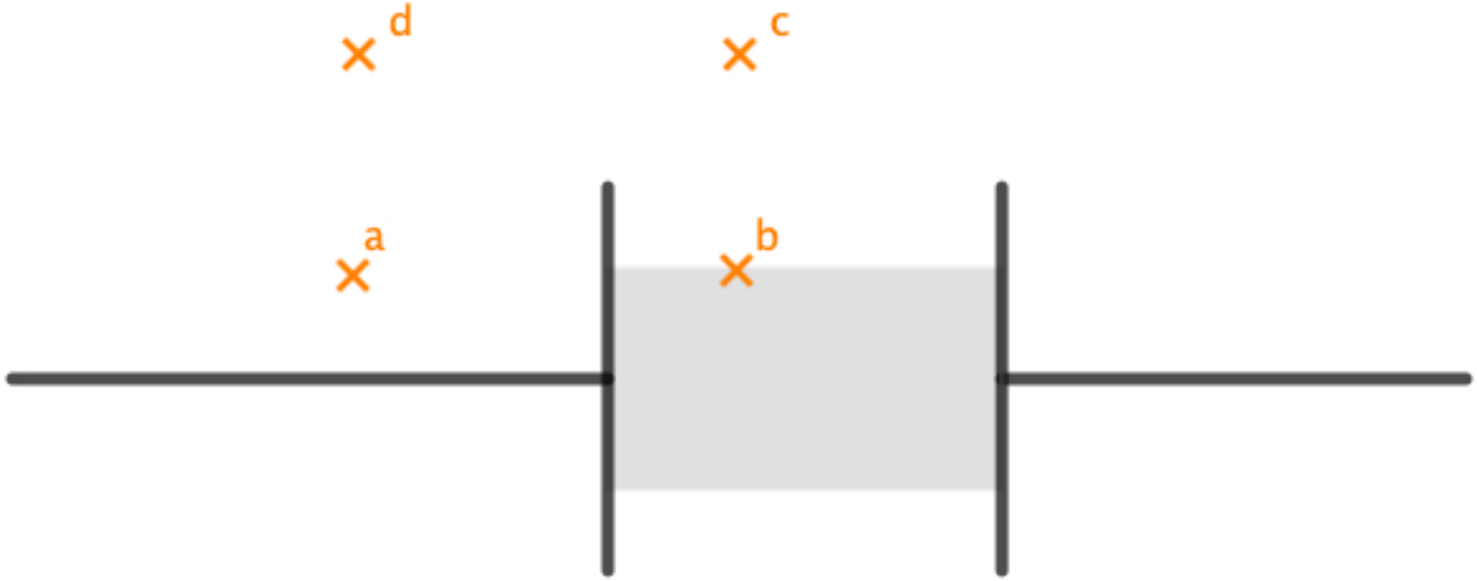
$$I_{in} = I(\frac{r}{R})^2 = j_0 \cdot \pi r^2$$

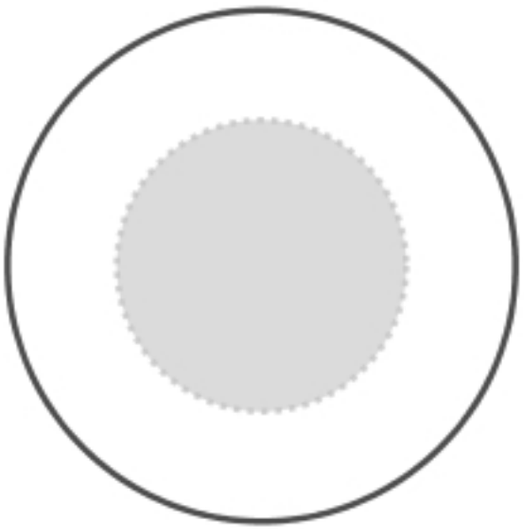
$$\vec{B}_{(r)\hat{\theta}} = I(\frac{r}{R})^2 \cdot \frac{1}{r} = \frac{\boldsymbol{I}}{\boldsymbol{R^2}} \cdot \boldsymbol{r} \qquad 0 < r < R$$

$$\vec{\boldsymbol{B}}_{\boldsymbol{(r)\hat{\theta}}} = \boldsymbol{I} \cdot \frac{\boldsymbol{1}}{\boldsymbol{r}} \qquad R < r$$

$$B_{(r)} = \frac{I}{r}\hat{\theta}$$

$$\vec{B}_{(r)} = \frac{I}{R^2} r\hat{\theta}$$





$$\boldsymbol{B_a = \frac{I}{\frac{1}{2}R}\hat{\theta}}$$

$$\boldsymbol{B_c = B_d = \frac{I}{2R}\hat{\theta}}$$

$$\boldsymbol{B_B = \frac{I}{R^2} r\hat{\theta}} \qquad \vec{B} = \frac{\left(\frac{r}{R}\right)^2 \cdot I}{r}$$