

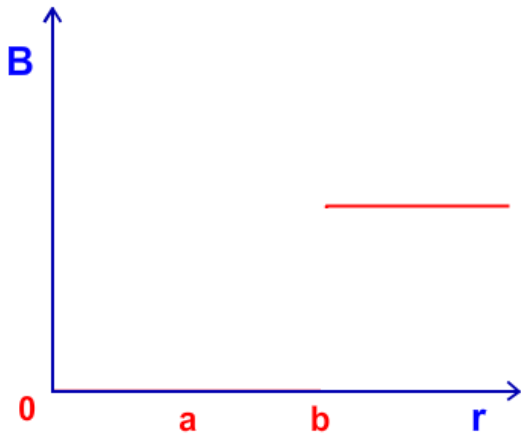
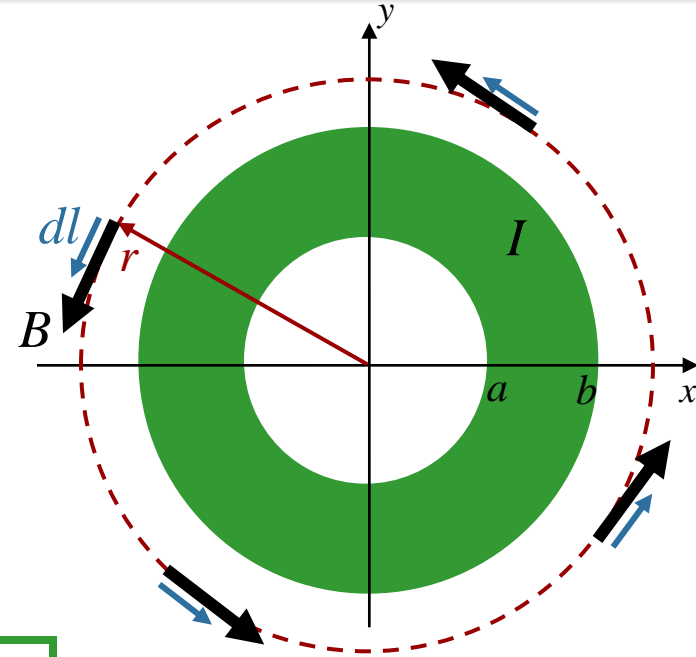
Example Problem

What does $|B|$ look like for $r > b$?

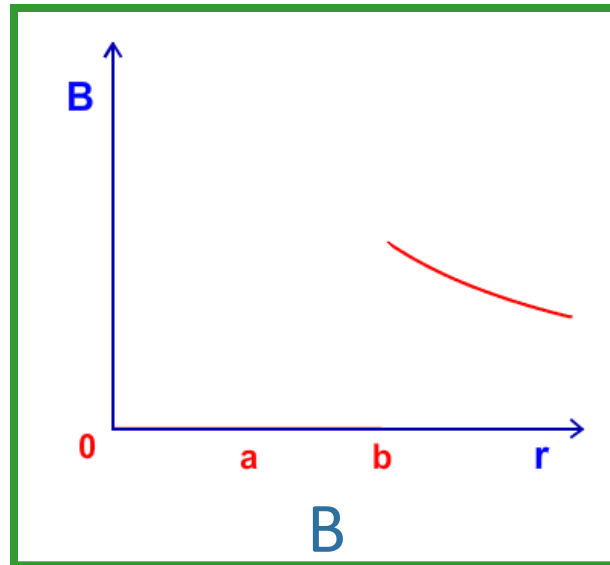
$$\text{LHS: } \oint \vec{B} \cdot d\vec{\ell} = \oint B d\ell = B \oint d\ell = B \cdot 2\pi r$$

$$\text{RHS: } I_{\text{enclosed}} = I$$

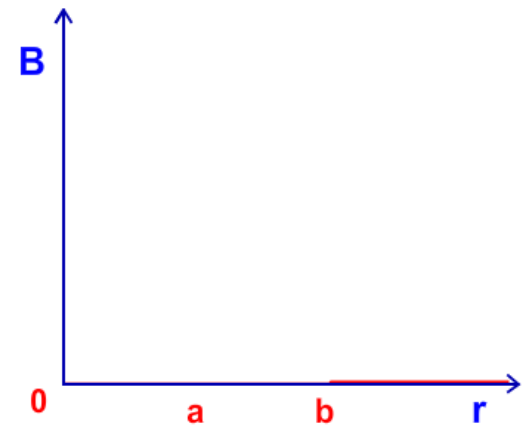
$$\longrightarrow B = \frac{\mu_0 I}{2\pi r}$$



A



B



C