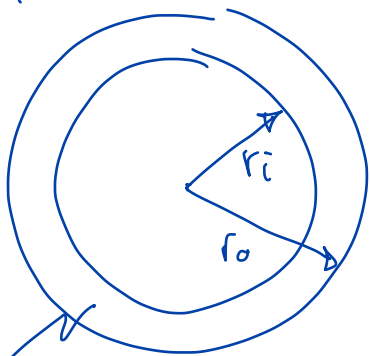


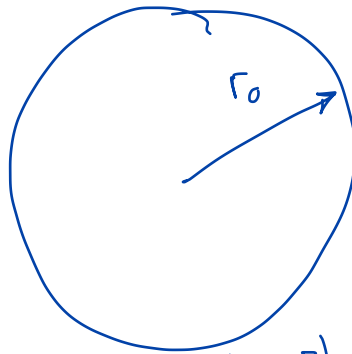
20-R-1M-PT-4

I_{tot}



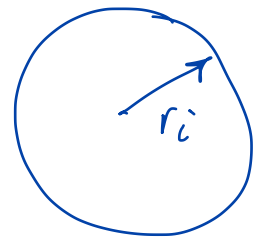
=

I_o



$$m_o = \rho (\pi r_o^2)$$

- I_i



$$m_i = \rho (\pi r_i^2)$$

$$\rho = \frac{\text{mass}}{\text{area}} = \frac{m}{(\pi r_o^2 - \pi r_i^2)}$$

$$I_{\text{tot}} = \frac{1}{2} m_o r_o^2 - \frac{1}{2} m_i r_i^2$$

$$= \frac{1}{2} \underbrace{\frac{m}{(\pi r_o^2 - \pi r_i^2)}}_{m_o} (\pi r_o^2) (r_o^2) - \frac{1}{2} \underbrace{\frac{m}{\pi r_o^2 - \pi r_i^2} (\pi r_i^2)}_{m_i} r_i^2$$

Need to do this separately for EACH CONFIGURATION
(new density for retracted position)