

B/18

$$\text{Disk : } I_{zz} = \frac{1}{2}mr^2, I_{xx} = \frac{1}{4}mr^2$$

$$\text{Both rods : } I_{zz} = 0, I_{xx} = 2\left(\frac{1}{3}\frac{m}{2}L^2\right) = \frac{1}{3}mL^2$$

$$I_{zz} = I_{xx} : \frac{1}{2}mr^2 + 0 = \frac{1}{4}mr^2 + \frac{1}{3}mL^2$$

$$\frac{3}{4}r^2 = L^2 \text{ or } L = \frac{r\sqrt{3}}{2}$$