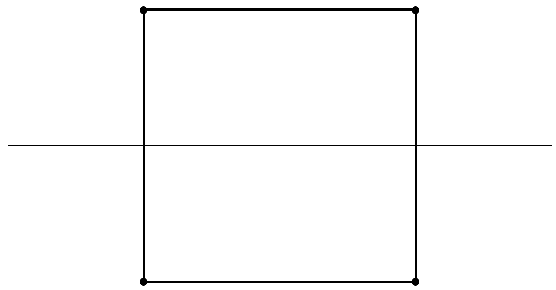
40. (a) We show the figure with its axis of rotation (the thin horizontal line).



We note that each mass is $r = 1.0$ m from the axis. Therefore, using Eq. 11-26, we obtain

$$I = \sum m_i r_i^2 = 4(0.50 \text{ kg})(1.0 \text{ m})^2 = 2 \text{ kg}\cdot\text{m}^2 \ .$$

(b) In this case, the two masses nearest the axis are $r = 1.0$ m away from it, but the two furthest from the axis are $r = \sqrt{1.0^2 + 2.0^2}$ m from it. Here, then, Eq. 11-26 leads to

$$I = \sum m_i r_i^2 = 2(0.50 \text{ kg})(1.0 \text{ m}^2) + 2(0.50 \text{ kg})(5.0 \text{ m}^2) = 6.0 \text{ kg}\cdot\text{m}^2 \ .$$

(c) Now, two masses are on the axis (with $r = 0$) and the other two are a distance $r = \sqrt{1.0^2 + 1.0^2}$ m away. Now we obtain $I = 2.0 \text{ kg} \cdot \text{m}^2$.