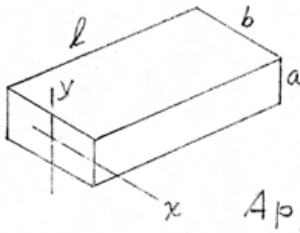
B/11 $\ell = 0.3$ m, $a = 0.03$ m, $b = 0.2$ m, $m = 15$ kg



From Sample Problem B/3

$$I_{yy} = \frac{1}{12} m (b^2 + 4\ell^2)$$

$$I_{xx} = \frac{1}{12} m (a^2 + 4\ell^2)$$

Approx. $I'_{xx} = \frac{1}{3} m \ell^2$

Fractional error $e = (I_{xx} - I'_{xx}) / I_{xx}$

$$= \frac{a^2/12}{a^2/12 + \ell^2/3} = \frac{1}{1 + (2\ell/a)^2}$$

$$I_{yy} = \frac{1}{12}(15)\left(0.2^2 + 4(0.3)^2\right) = \underline{0.5 \text{ kg} \cdot \text{m}^2}$$

$$e = \frac{1}{1 + \left(\frac{2 \times 0.3}{0.03}\right)^2}(100\%) = \frac{100}{401} = \underline{0.25\%}$$