

80. (a) With  $r = 0.780$  m, the rotational inertia is

$$I = Mr^2 = (1.30 \text{ kg})(0.780 \text{ m})^2 = 0.791 \text{ kg}\cdot\text{m}^2 .$$

- (b) The torque that must be applied to counteract the effect of the drag is

$$\tau = rf = (0.780 \text{ m})(2.30 \times 10^{-2} \text{ N}) = 1.79 \times 10^{-2} \text{ N}\cdot\text{m} .$$