

Solutions

Each answer shows the steps, then the **result**.

2.1

- $L = I\omega = 0.50 \times 8.0 = 4.0 \text{ kg m}^2 \text{ s}^{-1}$

2.2

- $\Delta L = \tau \Delta t = 4.0 \times 3.0 = 12 \text{ kg m}^2 \text{ s}^{-1}$

2.3

- $\tau = \frac{\Delta L}{\Delta t} = \frac{12}{2.0} = 6.0 \text{ N m}$

3.1 B

3.2 A

3.3

(a)

- $L = I\omega = 0.20 \times 30 = 6.0 \text{ kg m}^2 \text{ s}^{-1}$

(b)

- $\Delta t = \frac{L}{\tau} = \frac{6.0}{0.60} = 10 \text{ s}$