

Solutions

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

2.1

- $\alpha = \tau/I = 12/3 = 4 \text{ rad s}^{-2}$

2.2

- Rotational inertia I

2.3

- $\tau = I\alpha = 5 \times 2 = 10 \text{ N m}$

2.4

- It makes α smaller

3.1 B

- $\tau = I\alpha$

3.2 A

- $\alpha = 6/2 = 3 \text{ rad s}^{-2}$

3.3

(a)

- $\alpha = 4/0.5 = 8 \text{ rad s}^{-2}$

(b)

- It doubles

3.4

(a)

- $\alpha = 6/3 = 2 \text{ rad s}^{-2}$

(b)

- $\tau = I\alpha = 4 \times 2 = 8 \text{ N m}$