

Solutions

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

2.1

- $\omega = 0 + 4.0(5.0) = 20 \text{ rad s}^{-1}$

2.2

- $\theta = \frac{1}{2}(4.0)(5.0)^2 = 50 \text{ rad}$

2.3

- angular velocity ω

3.1 B

3.2 B

- $t = \frac{0 - 10}{-2.0} = 5.0 \text{ s}$

3.3

(a)

- $\alpha = \frac{8.0 - 20}{4.0} = -3.0 \text{ rad s}^{-2}$

(b)

- $\theta = \frac{1}{2}(\omega_0 + \omega)t = \frac{1}{2}(20 + 8.0)(4.0) = 56 \text{ rad}$