

# Correction — Prob 10-2

10-2 (b).

Angle turned.

0 - 2 sec.

$$\Delta \theta = \frac{1}{2} \alpha t^2$$

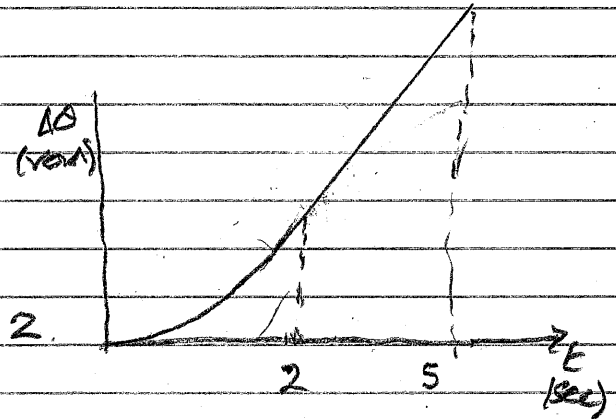
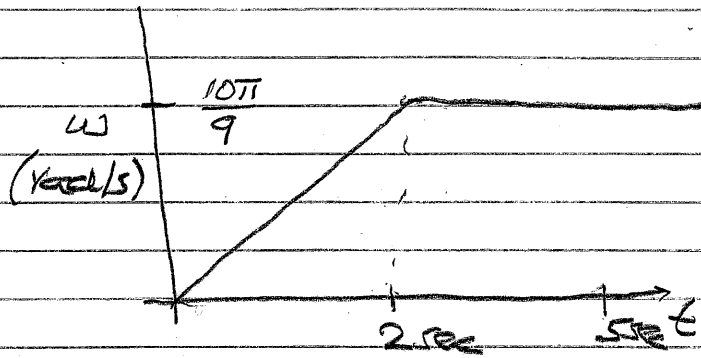
$$= \frac{1}{2} \times \frac{5\pi}{9} \times 4 \text{ rad}$$

2 sec - 5 sec

$$\Delta \theta = \frac{10\pi}{9} \times 3 \text{ rad.}$$

$$\Delta \theta (0-5) = \frac{10\pi}{9} + \frac{30\pi}{9} = \frac{40\pi}{9} \text{ rad}$$

$$\# \text{ of revolutions} = \frac{40\pi}{9 \times 2\pi} = 2.22$$



10-2 (c).

$$\Delta \theta = 4\pi \text{ radian.}$$

$$\text{1st 2 sec } \Delta \theta = \frac{10\pi}{9} \text{ rad.}$$

$$\text{FURTHER ANGLE } \frac{4\pi}{9} - \frac{10\pi}{9} = 2.89\pi$$

$$\text{Time taken } \Delta t = \frac{2.89\pi \times 9}{10\pi} = 2.6 \text{ sec}$$

$$\theta = \omega t$$

$$\text{Total time} = \underline{\underline{4.6 \text{ sec}}}$$

