3-11. Gear *A* starts from rest with a normally distributed angular acceleration  $\alpha_A \sim N(4, 0.4^2) \text{ rad/s}^2$ . If  $r_A = 0.2 \text{ m}$  and  $r_B = 0.5 \text{ m}$ , determine the angular velocity and angular displacement of gear *B* when t = 3 s.

**Solutions**:  $\omega_{B} \sim N(4.8, 0.48^{2}) \text{ rad/s}$ ,  $\theta_{B} \sim N(7.2, 0.72^{2}) \text{ rad}$ .

