3-1. A disk has a normally distributed radius $r \sim N(3, 0.3^2)$ ft and rotates at $\omega_0 = 2$ rad/s. If the disc subjected to a constant angular acceleration of $\alpha = 3$ rad/s^2 for 2 seconds, determine the distributions of both normal and tangential acceleration components at point *A*.

Solutions: $a_t \sim N(9, 0.9^2)$ ft/s^2 and $a_n \sim N(192, 19.2^2)$ ft/s^2