PROB. 15-1

$\theta = t^3 - 9t^2 + 15t$

FIND θ, $\dot{\theta}$ AND $\ddot{\theta}$ FOR $t = 0$ AND 3^s

$\dot{\theta} = 3t^2 - 18t + 15$

$\ddot{\theta} = 6t - 18$

a) $\theta(0) = 0$, $\dot{\theta}(0) = 15 \frac{RAD}{s}$, $\ddot{\theta}(0) = -18 \frac{RAD}{s^2}$

b) $\theta(3) = (3)^3 - 9(3)^2 + 15(3) = -9\ RAD$

$\dot{\theta}(3) = 3(3)^2 - 18(3) + 15 = -12 \frac{RAD}{s}$

$\ddot{\theta}(3) = 6(3) - 18 = 0 \frac{RAD}{s^2}$