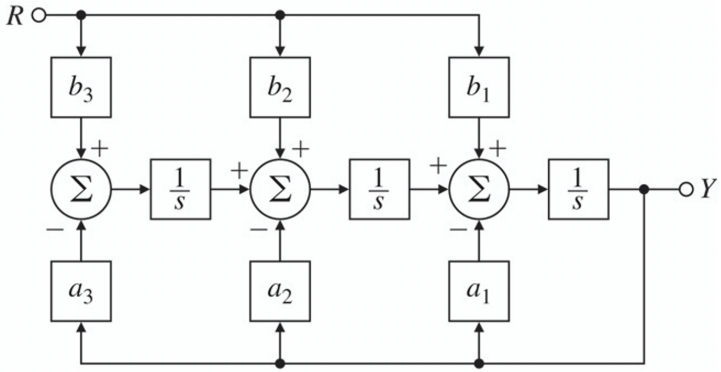
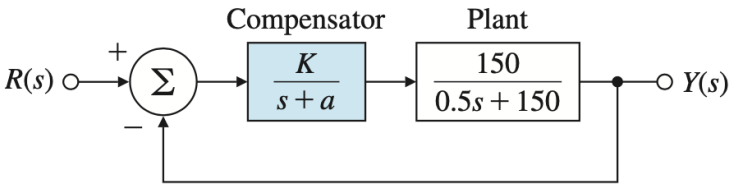
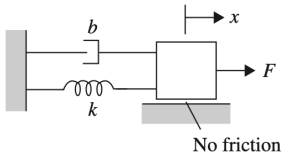
Exercise 3.20 Find the TF?



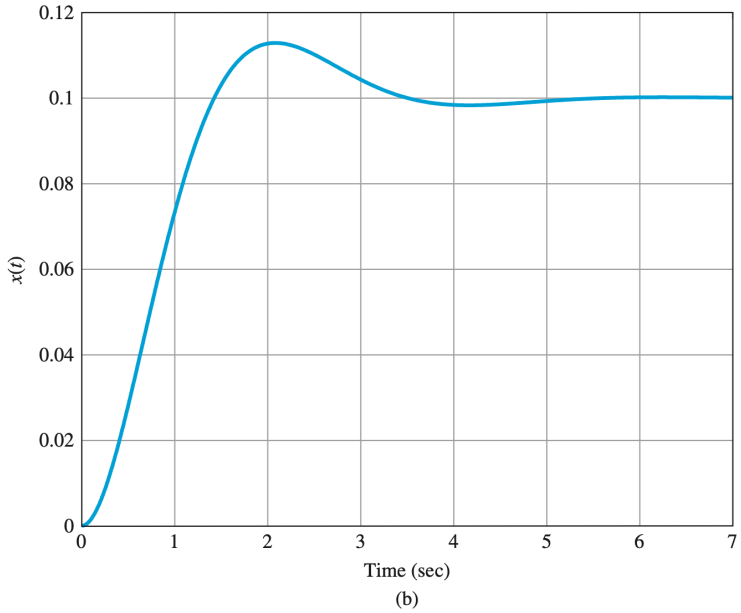
Exercise 3.26 Find K satisfying $M_p \leq 0.18$ and $t_s \leq 0.01s$ (1% criterion) ?



Exercise 3.32 Find m, b, and k when $F = 2 \cdot 1(t)$?

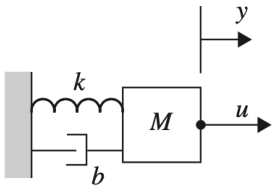


(a)

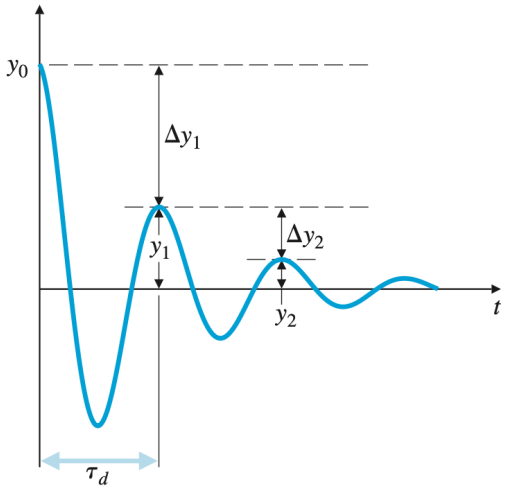


(b)

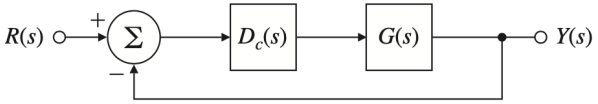
Exercise 3.33 Assume $M = 18kg$ and $u = A \cdot 1(t)$. Find k, b and A for $t_r = 0.7s$, $M_p = 14\%$, and $e_{ss} = 0$?



Exercise 3.36 Prove $\zeta = \frac{\delta}{\sqrt{4\pi^2+\delta^2}}$ using $\delta = \ln \frac{y_0}{y_1}$, where $\tau_d = \frac{2\pi}{\omega_d}$?



Exercise 3.40 Find k, z and p for $M_p = 10\%$ and $t_s = 1.5s$(1% criterion) when $G(s) = \frac{1}{s(s+3)}$ and $D_c(s) = \frac{K(s+z)}{s+p}$?



Exercise 3.51 Derive the time to double τ_2 for 1st and 2nd order system?