

# Conversion of selected problems from 13th edition to 12th edition

Tim Davidson

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In this document I describe how certain problems in the 13th edition of Dorf and Bishop's text book can be converted back into the corresponding problem in the 12th edition. These problems are marked with an asterisk on the "Recommended Problems" page of the Eng 3CL4 web site.

- E2.30: Change  $G(s)$  to  $\frac{10}{s^2+2s+10}$ .
- P2.48: Set  $R_1 = 100\text{k}\Omega$  and  $C_1 = 1\mu\text{F}$ .
- E4.15: Set  $K = 120$  and  $K_1 = 10$ .
- E5.11: Set  $G(s) = \frac{5(s+8)}{s(s+1)(s+4)(s+10)}$
- E6.2: Let the polynomial be  $s^3 + 10s^2 + 2s + 30 = 0$
- E6.11: Let  $\frac{Y(s)}{R(s)} = \frac{24(s+1)}{s^4+6s^3+2s^2+s+3}$
- E6.25: Change the transfer function of the left block to  $Ks + 1$
- E6.26: Set  $G(s) = \frac{10}{s-10}$
- E7.27: Set the controller to  $\frac{s+10}{s}$  and the process to  $\frac{4}{s+p}$ .
- P7.1: Set  $L(s) = \frac{K(s+5)}{s(s+1)(s+10)}$
- P7.4: Set  $\tau = 0.15$  and  $\omega_n = 1.5$
- E9.6: Set  $L(s) = \frac{K(s+100)}{s(s+10)(s+40)}$
- E9.21: Set  $L(s) = \frac{K}{s(s+2)(s+50)}$ . Do the exercise for  $K = 1300$ .