1. Bequette: Chap. 5 #4
2. Bequette: Chap. 5 #16
3. Bequette: Chap. 5 #20
4. Bequette: Chap. 6 #7

5. Consider the closed-loop transfer function $G_{CL} = \frac{K_c(1+s)}{10s^3+17s^2+8s+1+K_c}$.

   a. For the case K_c = 1, enter the transfer function into Matlab using the `tf()` function. Use the `step()` function to plot the response of this system to a step function input.

   b. Write a Matlab program which uses a `for` or a `while` loop to cycle through values of K_c from 0.1 to 25.6, doubling K_c in each successive cycle. Inside the loop, create a plot with the results of each run. Use the `hold on` command to show the evolution of the response of the system on a single plot.