2nd HOMEWORK (25 April - 27 May)

1. Plot root locus diagram by taking K as a free parameter. Based on root locus, propose a value for K for "good response". For this value of K, plot the closed loop response to unit step.

2. By using MATLAB and control toolbox;
   a) Obtain and plot the responses of the closed loop system for the input functions in (1)
   b) Find e_{ss} values from your MATLAB plots for inputs listed in (1)
   c) Obtain the transient performance measures (listed in question 1) from the related MATLAB plot. Compare with your answers to question 1.
   d) Plot root locus by using MATLAB. Answer question 2 by using MATLAB root locus plot

Note: You may probably use MATLAB functions listed in the next page. For more details using these functions type "help *function_name*" in MATLAB commend window.

[*] Everyone will have a different parameter setting. Your parameters (K, a, b, c, d) will be declared.