

Analysis of Engineering Systems – MAE 488  
Homework # 9

**Instructions:** SHOW YOUR WORK! *If insufficient work is shown, you will receive no credit (even for a correct answer). As always, be sure to include units where appropriate. All plots should have labels on each axis (with units), a title (e.g. “MAE 488, Homework 1, Problem 1, Part a”), and a legend if more than one plot is in the same figure (except for subplots).*

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Use Matlab as required/desired (including for root locus plots). You are not required to sketch them by hand (but it doing so may provide you with a better understanding). The topic of sketching by hand is covered well in the textbook but I will not cover it in class.

11.2M, 11.6M, 11.9M, 11.28, 11.33, 11.45M

*Extra Credit (10%) Text problem 11.59*

Highly recommended (but not graded): 11.32, 11.34, 11.36, 11.61S