Homework #5: Root Locus Method.

Problems are from *Franklin, Powell, Emami*, <u>Feedback Control of Dynamic Systems</u>, 5th Edition (FPE). Read Chapter 5 (twice) to help you understand this. Note that this material <u>***IS***</u> covered on the midterm. Midterm will be in Kresge 327, on 14-Feb-08, during normal class time. Solution set will be posted at 8PM on the 13th (note the due date here).

1. Midterm Review will be at 6PM, 13-Feb-2008, in E2 (Room TBD).

2. FPE 5.1 (b) and (d-iii).

3. FPE 5.2. Rough sketches are OK.

4. FPE 5.4 (a).

5. FPE 5.5 (d).

6. FPE 5.6 (c).

7. FPE 5.7 (d).

8. FPE 5.8 (f).

The point of the exercise is to learn to sketch the root locus by hand. It is OK to check your answers using MATLAB, but don't rely on it. Learn to be critical observers. The MATLAB command is *rlocus* and *rlocfind*. Type "help" for full descriptions.