Mat 240F - Term test information

Thursday, October 23rd, 2:10–4pm, EX 300 (Examination Facility, 255 McCaul Street (just south of College)).

NO AIDS ALLOWED - you cannot use calculators, notes, text, or a formula sheet. Exam booklets will be provided: bring your own pen or pencil.

Material for test: Material related to Problem Sets 1–4, that is, up to and including bases and dimension (Section 1.6), except for DeMoivre's formula.

Review questions are posted on the course home page. (*Note*: Solutions will not be provided.)

Axioms for fields and vector spaces: you need only state the axioms when solving a problem that asks you to use the axioms (for example, questions 5 and 9 from Problem Set 1, and questions 1 and 2 from Problem Set 2).

Using theorems proved in class, in the text, or in Problem Sets 1–4; when using a theorem in solving a problem, you don't need to remember the number of the theorem or the section of the text in which it appears. You should state the fact and say it was proved in class, in the text, or on a problem set. For example, suppose that you want to use the fact that if a S is a subset of a subspace W of V, then span(S) is a subspace of W. Then you state the fact before using it: you can write "As proved in class (and textbook), if S is a subset of a subspace W of a vector space V, then span(S) is a subspace of W." After that, you indicate what S and W are in the setting where you are applying the result, and explain why S is a subset of W. (The point here is to verify that the assumptions of the theorem that you are using are satisfied!) After doing this, you can conclude that span(S) is a subset of W and proceed with the solution of the problem.

You can use results from the first four problem sets, including questions that were not marked. (Again, you should give a brief statement of the result that you're using, and explain why it applies ot the particular problem that you are solving.)

Topics not on the term test: DeMoivre's formula (from notes on fields); Lagrange interpolation (from Section 1.6); direct sums of subspaces; linear transformations.