

Math 223
Problem Set 2
Due Friday, January 30
Patrick Brosnan, Instructor

Reading. Read Appendices A-D and Chapter 1 in the text, *Linear algebra* by Friedberg, Insel and Spence referred to from now on as FIS.

Practice. Do the following exercises in the FIS but do not turn them in for a grade.

- (1.4) 1-5 (in case you forgot to do these in Problem Set 1)
- (1.5) 1, 2, 4, 8
- (1.6) 1-7

Mandatory assignment. Turn in solutions to the following problems from FIS.

- (1.4) 6, 9, 10, 15
- (1.5) 3, 6, 9, 20
- (1.6) 8, 20

In addition, do the following problem.

- (1) Use proof by induction to show that $\sum_{i=1}^n i^2 = n(n+1)(2n+1)/6$.