

**MAT 512 HOMEWORK 3. DUE AT THE BEGINNING OF CLASS ON MONDAY,
FEBRUARY 17**

One goal for this course is for you to develop your skill in effectively communicating mathematics. With this in mind, you should clearly write up your solutions. A solution with little or no justification will receive little or no credit.

- (1) Please continue reading through page 60 in the book.
- (2) Do exercise 4.2 on page 42. Do parts 1, 2, and 4 of Exercise 4.5 on page 45.
- (3) Do Exercise 4.7 on page 48.
- (4) Do exercise 4.8 from page 48. We may work on this proof in class. Please carefully *write* your solution, explaining your reasoning.
- (5) Do any two parts of Exercise 4.10 on page 50.
- (6) Do exercise 4.12 on page 55. This is a final solution to the introductory problem.