

**MATH 512 HOMEWORK 10—DUE AT THE BEGINNING OF CLASS ON TUESDAY,
APRIL 28, 2009**

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.

- (1) Read chapter 12.
- (2) Do exercises 12.3, 12.5, and 12.7
- (3) Do either (a) or (b) below:
 - (a) Exercise 12.1
 - (b) Prove theorem 12.3, which states that polynomials of positive degree factor uniquely in $K[x]$. You can use the outline (exercises 12.9 and 12.10) if you want.