

Appendix A

Some Algebra

This appendix is broken into three sections.

The first section discusses doing basic arithmetic and vector algebra over arbitrary fields of coefficients, rather than restricting to the usual rational, real, or complex fields. Anyone who has had contact with some abstract algebra at college level should be comfortable with this material. Those already familiar with it should be aware that the section contains some of the definitions that we shall be using, so it can not be skipped entirely.

The second section deals with the fundamentals of polynomial algebra with coefficients from an arbitrary field. This material is more advanced but most should again look familiar, particularly to students who have had an undergraduate level abstract algebra sequence.

The final section covers more specialized topics that may not seem familiar.