

INTEGERS

Chapter 1 of the text introduces the basic ideas from number theory that are a prerequisite to studying abstract algebra. Many of the concepts introduced there can be abstracted to much more general situations. For example, in Chapter 3 of the text you will be introduced to the concept of a *group*. One of the first broad classes of groups that you will meet depends on the definition of a *cyclic* group, one that is obtained by considering all powers of a particular element. The examples in Section 1.4, constructed using congruence classes of integers, actually tell you everything you will need to know about cyclic groups. In fact, although Chapter 1 is very concrete, it is a significant step forward into the realm of abstract algebra.