HOMEWORK 1, DUE THURSDAY JANUARY 18TH

All numbers refer to Herstein.
1. Chapter 4, Section 1: 2, 8, 10, 11, 14, 15, 19, 20, 23.
2. Chapter 4, Section 2: 2, 3, 8.

Challenge Problems: (Just for fun)

3. Chapter 4, Section 1: 33, 36, 40.
4. If r belongs to a commutative ring R then we way that r is **nilpotent** if $r^n = 0$ for some positive integer n.
If r is nilpotent then prove that $1 - r$ has an inverse.