Read Artin, Chapter 1, sections 1 and 2.

From Artin, do problems from:
   Section 1.1 (pp.31-33): 2(b), 3, 6, 11, 16, 19, 20.
   Section 1.2 (pp.33): 2(a,b).

Also do the following problem:
   Let $A$ be a square matrix satisfying $A^2 - 2A - I = 0$. Show that $A$ is invertible, and find a formula for $A^{-1}$ in terms of $A$. [Hint: By \emph{inspection}, find a matrix $B$ such that $AB = BA = I$.]