Read sections:
1. 3.3

Do the following problems:
1. 3.2: 2, 3, 7, 10, 12
2. 3.2: 8, 16
3. Suppose that $D$ is a domain with field of fractions $Q$, that $i : D \rightarrow Q$ is the usual injection, and that $\sigma$ is an automorphism on $D$. Prove that there is a unique automorphism $\overline{\sigma} : Q \rightarrow Q$ such that $\overline{\sigma}(i(d)) = i(\sigma(d))$ for all $d \in D$. For uniqueness, you need to show that if $\psi : Q \rightarrow Q$ is an automorphism such that $\psi(i(d)) = i(\sigma(d))$ for all $d \in D$, then $\psi(a/b) = \overline{\sigma}(a/b)$ for all $a/b \in Q$.
4. Show that the multiplication we defined on $Q$ in class (namely $[a,b][c,d] = [ac,bd]$) is well defined and associative.

The grader will carefully consider 3.2.8, 3.