Math 81. *Abstract Algebra.*

Homework 7. Due on Wednesday, 3/3/2010.

- Determine all the subfields of the splitting field of $x^4 - 2$ which are Galois over $\mathbb{Q}$.

- Page 582, problem 11.
  Hint: For the first part, it helps to show first that A_4 is the only subgroup of S_4 with index 2. Also, Figure 8 from Chapter 3.5 may be useful.

- Page 589, problems 1, 3, 8.

- Page 595, problem 1.