

Math 7120 – Homework 11 – Due: April 25, 2022

Practice problems:

Problem 1. Dummit and Foote, 14.2 problem 5.

Test prep:

Problem 2. Determine the minimal polynomials, over \mathbb{Q} of the following:

- (1) $\sqrt{2} + \sqrt{5}$
- (2) $1 + \sqrt[3]{2} + \sqrt[3]{4}$

Problem 3. Determine the Galois group of $(x^2 - 2)(x^2 - 3)(x^2 - 5)$.

Type solutions to the following problems in L^AT_EX, and email the tex and PDF files to me at dbernstein1@tulane.edu by 10am on the indicated date. Please title them as [lastname].tex and [lastname].pdf. When preparing your solutions, you must follow the rules as laid out in the course syllabus.

Graded Problems:

Problem 4. Dummit and Foote, 14.2 problems 10, 11, 13.