

Eighth Homework Assignment

- 11/15: Josh Ducey Irreducible Polynomials
- 11/17: Ryan Daut and Mike Pohl Galois Rings
- 11/19: Tim Lambie-Hanson Constructibility
- 11/22: Nathaniel Givens Elliptic Curves
- 11/29: Robin Haskins Simplicity of A_5
- 12/1: Vishal Kasliwal π is transcendental
- 12/3: Tim Ferguson Insolvability of the quintic

Turn-in problems due 11/22 Chapter 22: 2,4,10,12,18,20,24,26,30

★ **problem:** Prove: if F is a finite field, then $H \cup \{0\}$ is a subfield of F for every subgroup H of the multiplicative group F^* if and only if the order of F^* is either 1 or a prime number of the form $2^p - 1$ with a prime p .