April 21, 2021

18.702 Problem Set 9

due Wednesday, April 28

1. Chapter 15, Exercise 3.2. *(a polynomial that is irreducible over $\mathbb{Q}[\sqrt[3]{2}]$)*

2. Chapter 15, Exercise 3.7a. *(is i in the field $\mathbb{Q}\big(\sqrt[4]{-2}\big)$?)*

3. Chapter 15, Exercise 3.8. *(a condition for α and β to be algebraic)*

4. Chapter 15, Exercise 4.1. *(the irreducble polynomial for $1 + \alpha^2$)*