18.702 Problem Set 8

due Thursday, April 27

1. Chapter 15, Exercise 3.4. *(the irreducible polynomials for some ζ)*

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

3. Chapter 15, Exercise 5.2. *(constructing the regular pentagon)*

4. Chapter 15, Exercise 7.6. *(factoring x^9 − x)*

5. Chapter 15, Exercise M4. *(the irreducible polynomial for √2 + √3)*

6. Chapter 15, Exercise M5. Do either (a) or (b). *(elements of finite order in GL_2(ℤ))*