18.702 Problem Set 7

due Wednesday, April 14

1. Chapter 13, Exercise 7.3. (*some norms with* \( d = -26 \))

2. Determine the ideal class group in the ring of integers \( R = \mathbb{Z}[\delta] \) when \( \delta^2 = d \), with
   (a) \( d = -37 \), and (b) \( d = -41 \).

3. Chapter 13, Exercise 8.4. (*the cases of unique factorization*)

4. Chapter 14, Problem 1.4. (*Schur’s Lemma*)

5. Chapter 14, Problem 4.5. (*lattices in the complex plane*)