

Due: Friday, November 2, 4:30 p.m.

Leave in Liz's LGRT 1623D mailbox

1. In the notation of the Division Theorem (2.1.1), take $m = 5864$ and $n = 23$. Express m in terms of n in the form guaranteed by the Division Theorem.
2. Flesh out the skeleton proof of Lemma 2.1.7 provided in the text.
3. Prove Proposition 2.2.5 part 4.
4. Do Exercise 2.2.9 (c).
5. Do Exercise 2.2.21 (1). *Hint:* Do *not* think this one must be a matter of odd vs. even!
6. **Extra credit:** Do Exercise 2.2.21 (6).
7. Let J be the union of $\{0\}$ with the set of all *odd* integers. Is J an ideal in \mathbb{Z} ?
8. Do Exercise 2.2.26 (4).