1. **Principal Ideal Domains**

1. Do Problem #4 of §8.2 of Dummit and Foote.
2. Do Problem #5 of §8.2 of Dummit and Foote.

2. **Unique Factorization Domains**

3. Do problem 2 of section 8.3 of Dummit and Foote
4. Do problem 5 of section 8.3 of Dummit and Foote.

3. **Modules for a Ring**

5. Do problem 8 of section 10.1 of Dummit and Foote
6. Do problem 9 of section 10.1 of Dummit and Foote.
7. Do problem 10 of section 10.2 of Dummit and Foote.
8. Do problem 9 of section 10.3 of Dummit and Foote.