

Math 357: Undergraduate Abstract Algebra 2.      Instructor: Dr. C. Walton

**Homework #12 on lecture material from M 4/19, W 4/21**

**Due: Wednesday, April 28, 2021 at noon \*sharp\*** (*better to submit early*)

Include full statements of problems in your solution set.  
See syllabus for grading guide and teaching page for writing tips

**Please include your full name at the top of your homework set.**

**Practice Problems** (discussed during class time)

- (1) [Mon] Dummit-Foote, Exercise §14.3 #1
- (2) [Mon] Dummit-Foote, Exercise §14.3 #3
- (3) [Wed] Dummit-Foote, Exercise §14.4 #1

**Advanced Problems** (completed outside of class time, and \*can discuss in class if time permits)

- (A) [Mon\*] Dummit-Foote, Exercise §14.3 #9
- (B) [Wed\*] Dummit-Foote, Exercise §14.4 #4
- (C) [Wed\*] Dummit-Foote, Exercise §14.4 #5
- (D) [general exercise] Verify that  $\mathbb{Q}(\sqrt[3]{2})$  is not a subfield of any cyclotomic field over  $\mathbb{Q}$ .