

**MATH 109 WINTER 2007 HOMEWORK 5, DUE 2/9/07 IN
CLASS**

(All exercise and page numbers refer to Eccles.)

1. READING AND PRACTICE

Read Chapters 15-18 of the text, and do as many of the end of chapter exercises as possible.

2. EXERCISES TO SUBMIT ON FRIDAY 2/9

1. In the Exercises IV which begin on page 225 of the text, do #6, 7, 10, 13, 14, 15(i)(ii) (find all integer solutions), 16.

Suggestions.

#7. Write out the Euclidean algorithm to calculate $\gcd(u_8, u_7) = \gcd(21, 13)$ so you can see what is happening before you attempt to prove this in general.

#13. This one has many parts. As scratchwork, calculate $\text{lcm}[24, 80]$ first and follow through some of the parts with $a = 24, b = 80$, so you can better see what those parts are saying in this case.

There are at least 6 separate statements you are asked to prove or do something with. Clearly separate them out visually in your writeup (at least start a new paragraph for each one.) If you can't do them all at least try to do the first one (the part with the hint.)