

MAT 312/AMS 351: Applied Algebra

Homework Assignment 6

Written Assignment due before 11:30am, Thursday, 10/17

Please read Sections 5.1 and 5.2 before starting on the problem set.

Practice Problems (do not hand in; answers in the book): 5.1 2-8,10; 5.2 1,3,5

Written Assignment: 5.1 1,9; 5.2 2,4; Problem C (below)

Show your work; correct answers without explanation will receive no credit, unless noted otherwise

Please write your solutions legibly; the grader will disregard solutions that he does not find readily readable (you are encouraged to type up your solutions, especially if your handwriting is not absolutely immaculate). The problems on your solutions must appear in the assigned order; out-of-order problems will not be graded. All solutions must be stapled (no paper clips) and have your name (first name first), recitation number (R01 or R02), and HW number in the upper-right corner of the first page; otherwise, you may receive no credit.

NO late homework will be accepted

Problem C

Determine the elements of the cyclic subgroup of $GL_n\mathbb{Z}$ generated by the matrix

$$g \equiv \begin{pmatrix} 1 & 1 \\ -1 & 0 \end{pmatrix}$$

explicitly.