

MATH 4306 Lab Activities 5
Submissions due Thursday, February 21, 2002

All group members must sign the submission attesting to the fact that they participated fully in doing this assignment.

There are two parts of the activity, A and B. Use the last digit of the student ID number of the person in the group coming first alphabetically to decide which part to do. (Individuals are considered groups of one here) Those with an odd digit do at least part A. Those with an even digit do at least part B. Of course, all groups are welcome to do more.

Part A.

A1. Do the activity in Section 2.2.1, #1, p. 57. You should run your funcs to verify they perform as described.

SUBMIT: A listing of the ISETL code of the funcs `Zmod` and `amod`. You should also post them by your group name on the class wiki page.

A2. Do the activity in Section 2.2.1, #2, p. 57.

SUBMIT: A list of pairs of non-negative integers and the result of repeated application of the function to each pair. Also submit your verbal explanation of what is going on.

A3. Do the activity in Section 2.2.1, #3, p. 58.

SUBMIT: A description of the func you used to complete this activity and the succession of “division formulas.”

A4. Do the activity in Section 2.2.1, #4, p. 58.

SUBMIT: Your list of the different ways to test if the relation in the activity holds with a description of why each way works. Also post your ways on the wiki page.

Part B.

B1. Do the activity in Section 2.2.1, #5, p. 58.

SUBMIT: The number of permutations in each group S_n .

B2. Do the activity in Section 2.2.1, #6, p. 58.

SUBMIT: The ISETL code for your func `support` and the results of applying it to the given permutations.

B3. Do the activity in Section 2.2.1, #7, p. 58.

SUBMIT: The ISETL code for your func `is_disjoint` and the results of applying it to all possible pairs of permutations from Activity #6.

B4. Do the activity in Section 2.2.1, #8, p. 58.

(Continued)

SUBMIT: The lines of numbers that result and the observations you make about what came out.

B5. Do the activity in Section 2.2.1, #9, p. 58.

SUBMIT: The difference between the permutation `p` and the tuple `orbit` returns. It is worth looking at what the func `orbit` does, but you do not need to submit a description of what it does.

B6. Read the activities in Section 2.2.1, #11 and #12, pp 59-60.

SUBMIT: Nothing.