

HOMEWORK #3 Due Date is the beginning of class, Monday, February 18.

Problem 0.1.

Label the rotations and reflections of a square (there should be 8 total). Give the Cayley table (the multiplication table) for the group formed by these operations. (You can easily find this problem online.)

Problem 0.2.

Exercise 1.45 in the text.

Problem 0.3.

Exercise 1.46 in the text.

Problem 0.4.

Exercise 1.47 in the text.

Problem 0.5.

Exercise 1.49 in the text.

Problem 0.6.

Exercise 1.50 in the text.

Problem 0.7.

Exercise 1.51 in the text.

Problem 0.8.

Exercise 1.55 in the text. Be sure to state the entire addition and multiplication tables for the field (even though we have already filled in most of the entries). As well, show work to justify your answer.

Problem 0.9.

Exercise 2.9 in the text.

Problem 0.10.

Exercise 2.25 in the text.

Problem 0.11.

Exercise 2.49 in the text.

Problem 0.12.

Exercise 2.50 in the text.

Problem 0.13.

Exercise 2.51 in the text.