

MAT 150C, Spring 2017

Homework Assignment 1

Due before the start of the class on Monday, April 10

Please read Sections 10.1 and 10.2 of the textbook before starting on the problem set.

Written Assignment:

Problem A; Page 314-315: exercises 1.1, 2.2, 2.3.

A. Consider the cyclic group $G = \langle x | x^n = 1 \rangle$.

- a) Describe all one-dimensional complex representations of G
- b) Prove that every complex representation of G has a one-dimensional invariant subspace.

The homework must be legible, and written in connected sentences that explains what you are doing. Just the answer (whether correct or not) is not enough. Please put your name and section number on every page and staple the pages together. Homework should be handed in on time, late homework will not be graded.