

MAT 150A, Fall 2019
Homework Assignment 6

Due before the start of the class on Wednesday, November 13

Written Assignment: Page 188, problems 1.1, 3.2, 5.5, Problem A.

Problem A: Let x and y be the reflections in two lines with angle π/n between them.

(a) Prove that $x^2 = y^2 = (xy)^n = I$.

(b) Prove that x and y generate the dihedral group D_n , that is, every element of D_n can be presented as a product of x and y in some order (say, $xyyyxyx$).

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.