Math 1007 Fall 2025

Mathematics and Politics

Homework 1

Due Wednesday, September 3 at 12:45 PM

Name:

Make sure to explain why all your answers are correct! Remember that you should be making short persuasive arguments.

(1) Consider the simple majority method for a multi-candidate election: "Any candidate who gets a majority of the votes is a winner". Explain why (and by what specific part of the definition) this is not a social choice function for a multi-candidate election.

(2) Do *The Mathematics of Politics* problem 2.2 parts (a) through (d)

(3) Do *The Mathematics of Politics* problem 2.4

(4) Do *The Mathematics of Politics* problem 2.8