Homework 7
Due Date: November 5

Please write up your solutions to Problem 1 or Problem 2 and submit them on Thursday. We will talk about both problems in class.

Problem 1. Six points are in general position in space (no three in a line, no four in a plane). The fifteen line segments joining them in pairs are drawn and then painted either red or blue. Prove that some triangle has all its sides the same color.

Problem 2. Given a set of $n + 1$ distinct positive integers, none of which is greater than $2n$, prove that at least two of the integers are relatively prime.