

17 Sept 2014

Math 181

Before the first midterm (Sept 26), the last section we'll cover is a more in-depth look at the pigeonhole principle. Work on the following three problems. You do not need to turn them in, but they will be good practice for the exam.

1. A drawer contains 14 black socks and 10 white socks. It is dark. How many socks must you take out of the drawer to be sure of having a pair of the same color?
2. Seven integers are chosen at random from the set $1, 2, 3, \dots, 11, 12$. Prove that two of the chosen integers will have odd sum.
3. In any group of six people, there are two who have an identical number of friends in the group.