

Math 55: Discrete Mathematics, Fall 2008
Reading and Homework Assignment 8

Reading:

Lecture 22: 5.5

Lectures 23-24: 6.1-6.2

Homework (due Monday, 10/27):

Odd-numbered self-checking exercises:

5.5: 9, 15, 31, 41

6.1: 7, 17, 35

6.2: 5, 13, 17, 23

Problems to hand in:

5.5: 10(a,c,f), 34, 42

6.1: 8, 16, 18, 30, 36

6.2: 8(a,c,d), 16, 34, 38

(A) Which of the following two probabilities is greater (or are they equal)?

- (i) The probability that a five-card poker hand contains all four aces, given that it contains a red ace;
- (ii) the probability that a five-card poker hand contains all four aces, given that it contains the ace of hearts.

(B) Find the probability that an integer chosen at random with equal probabilities from the set $\{0, \dots, 99\}$ has a multiplicative inverse modulo 100.