

MATH 636, Fall 2015  
HOMEWORK 1  
due 3:00PM on Tuesday, September 1.

*Background reading: Combinatorics: A Guided Tour, Section 1.1.*

**Follow the posted homework guidelines** when completing this assignment. In particular, remember that you must **fully justify** any assertions you make.

**Only** consult with your classmates or professor to discuss the problem set.

We will discuss solutions to these questions in class.

**1-1.** (ab) 1.1.2ab (This means parts a and b in Problem 2 of Section 1.1)

(c) And: Assuming that the coin is fair, what is the probability that a sequence of 20 flips has exactly 10 heads and 10 tails (in any order)?

**1-2.** How many orderings are there for a deck of 52 cards if all the cards of the same suit are together?