

**MATH 113: DISCRETE STRUCTURES
HOMEWORK 1**

Due: Friday January 30 by 10pm.

THIS HOMEWORK WILL NOT BE GRADED FOR CONTENT (only for completion). We will practice submitting assignments to Gradescope. The rest of the assignments will be graded for content.

Remark 1. This is homework on the content covered Monday of Week 1. In general, homework on content delivered during course meeting n will be due by 10pm on the day of course meeting $n + 2$. You are encouraged to start working on the homework shortly after course meeting n in order to have time to ask questions during office hours and tutoring.

Remark 2. Make sure to review the *Homework* portion of the syllabus before writing up your solutions! For instance: **you will only receive full credit if you provide full explanations.** Also, your **solutions should consist solely of complete sentences.** Simply providing the correct numerical solution does not suffice. See the *Mathematical Writing* appendix of the textbook for more tips.

Problem 1. (a) There are 12 students in this class. If you all decided to shake hands with each other, how many handshakes would that be?
(b) Again, there are 12 students. How many ways can I pair you up? This means breaking up the whole class into groups of two. How many ways can I form groups of three?