

## MATH 113: DISCRETE STRUCTURES HOMEWORK DUE MONDAY WEEK 2

*Remark 1.* This is homework on the content covered Wednesday of Week 1. It is due Monday of Week 2. In general, homework on content delivered during course meeting  $n$  will be due at the start 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 or via our Moodle forum.

*Remark 2.* The letters *DM:EB* refer to our textbook, *Discrete Mathematics: Elementary and Beyond*.

*Remark 3.* 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.

*Problem 1.* Problem 1.1.2 of *DM:EB*. (To be clear: Carl’s sense counts who sits on which side of each board but not the ordering of the boards, and Diane’s sense does the opposite: it matters how the pairs are assigned to boards but not who sits on which side.)

*Problem 2.* In how many ways can King Arthur and his twelve knights sit down at the legendary Round Table in Camelot? (Since the table is round, we will not consider rotations of a given seating arrangement as different.)