MATH 113: DISCRETE STRUCTURES
WEDNESDAY WEEK 5 HANDOUT B

Problem 1. Let n be the integer handed to you by your first team member for Problem 1. How many positive integers $\leq n$ are divisible by 2 or 3?

Problem 2. Let n be the integer handed to you by your first team member for Problem 2. At a long banquet table, the two seats on the far ends are designated the heads of the table (there is no foot). If there are $k = \lfloor n/6 \rfloor$ potential guests and the table seats $k - 2$ people (including the heads), in how many ways may one choose 2 distinguished guests to sit at the heads and $k - 4$ people to sit in the other positions? (Order does not matter.)