

MATH230 Week 4 Worksheet - Combinatorics Basics

Review of last week

1: Chipotle has 3 entree type options, 4 meat options, and 2 rice options. For any ingredient, you may choose to have it or not. Furthermore, if you choose a meat, you may choose to double it or not. For simplicity, forget beans, veggies, and mixing meats. How many entrees are possible?

2: How many ways are there to arrange 8 atoms of electrically neutral hydrogen in a line?

3: How many ways are there to make a stack of the 6 non-Disney Star Wars movies DVDs?

This week's material

4: Determine if the following are permutations or combinations: choosing 2 team captains from a lineup; choosing 3 books from a library; choosing a president and vice president from a student group

5: How many ways are there to arrange n distinct objects in a circle if rotation doesn't change an arrangement? What if we also consider reflections?