

EECS 302/MATH 304 Discrete Mathematics

Final Exam Practice Problems covering topics after Exam 2 (For topics up to Exam 2, See sample questions for earlier exams as well as the exam themselves)

1. **Topics:** Decision tree and CART, use the last homework to practice

2. **Topics:** Cardinality of a set and probability of an equally-likely random event and all counting topics in Chapter 9

Sample Problems:

2.1 What is the probability that a up to 5-digit integer selected randomly will be divisible by 13?

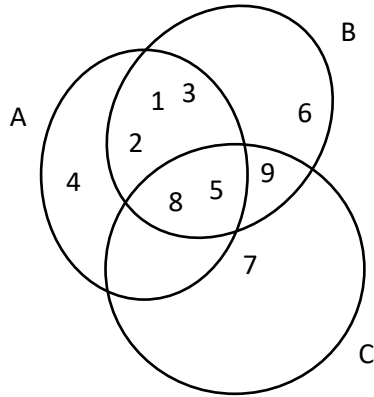
2.2 Given a group of 100 people, at minimum, how many people were born in the same month?

2.3 In a class 81 students, if there are five possible grades A, B, C, D, F , at least how many students will receive the same letter grade?

2.5 Consider the Venn diagram below for sets A , B and C , write down all members of the set

$$(A - B) \cup ((C - A) - B)$$

Then write down the power set of the resulting set



2.7 How many ways are there to distribute hands of 5 cards to each of four players from the standard deck of 52 cards?

3. **Topics:** Graphs and Digraphs

Sample problems:

3.1 How many edges are in K_5 ?