Problem 1. UCSD Phone Numbers

All UCSD campus phone numbers take the form 858-534-XXXX.

a) What is the probability of a randomly chosen UCSD phone number including the number 7?

1 - P(no.75) $\frac{9}{10} \times \frac{9}{10} \times \frac{9}{10}$

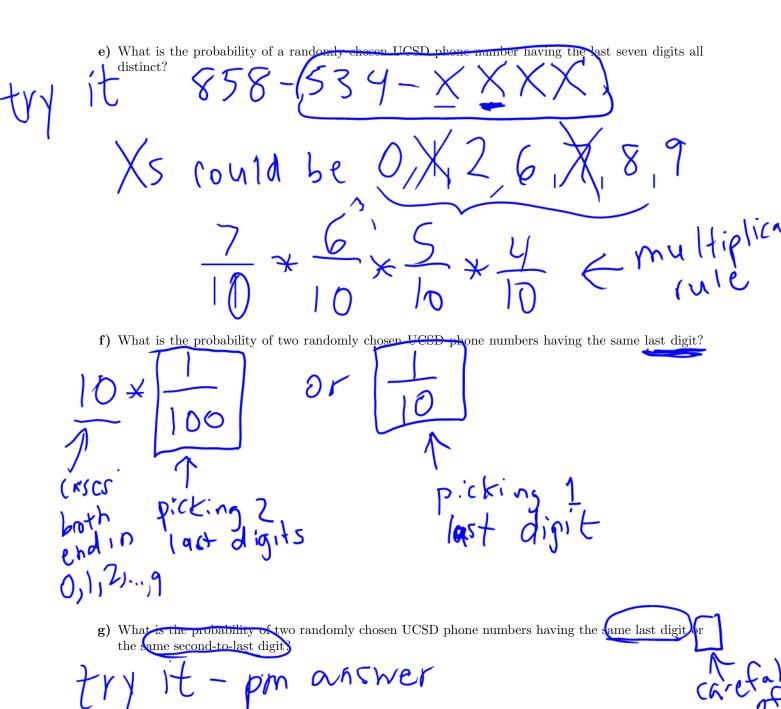
//b) What is the probability of a randomly chosen UCSD phone number containing to 0s, 1s, or 2s?

restakment: all 3,4,5,6,7,8,9 7 numbers

(7)

AND

which rule? c) What is the probability of a randomly chosen UCSD phone number containing exactly four 7s if we know that it contains at least three 7s?? Addition Rule: $P(A \cup B) = P(A) + P(B) - P(A \cap B)$ Multiplication Rule: $P(A \cap B) = P(A) \cdot P(B|A)$ P(ENF)=P Complement Rule: $P(\overline{A}) = 1 - P(A)$ Conditional Probability: · P(at least 3 7s) What is the probability of a randomly chosen UCSD phone number having the last four digits all distinct? another way to do (c) phone number with 475 phine number with 2375



Try It - pm answer $\frac{1}{10} + \frac{1}{10} \quad \text{but the cases}$ $\frac{1}{10} + \frac{1}{10} = \frac{1}{10} \quad \text{overlap}$ $\frac{1}{10} + \frac{1}{10} = P(A) + P(B) - P(A \cap B)$

Problem 2. Habla Espanol?

In your Spanish conversation class, the instructor randomly selects students to answer questions. You're cowering in the back of the room, hoping you never get called on.

a) If there are 25 students in your class and your instructor asks 6 questions, what is the chance that you are called on? Assume that for each question, any student is equally likely to be chosen, regardless of whether they have already answered another question.

complement: never called on each of the six times, it's someone else

b) If there are 25 students in your class and your instructor asks 6 questions, what is the chance that you are called on? Assume that for each question, any student who has not yet been called on is equally likely to be chosen. Students who have been called on cannot be called on again.

try it $\left| - \frac{1}{2} \right| = \left| \frac{2}{2} \right| + \left|$