

## LECTURE 4. I L-o-o-o-v-e to Count; Do You?

**Problem 1.** (a) My friend's zip code is 94128. How many different 5-digit zip codes can be formed using those 5 numbers? (b) My zip code is 94115. How many different zip codes can be formed from those 5 numbers? (c) How about 94111?

**Problem 2.** A club has 10 members. (a) How many different ways can they choose 3 club officers: a President, a V.P. and a Treasurer? (b) How many different 3 person committees can they choose to represent them at a conference? (c) How many different ways can all 10 of them sit at a round table? (d) How many ways can they sit if the President and V.P. sit next to each other?

**Problem 3.** The club in Problem 2 has 6 men and 4 women members. (a) How many 3 person committees can they choose that have exactly one women member? (b) How many with at least one women?

### TOPICS

A. The Counting Principle. Problem 1.

B. Permutations and Combinations. Problems 2 & 3.