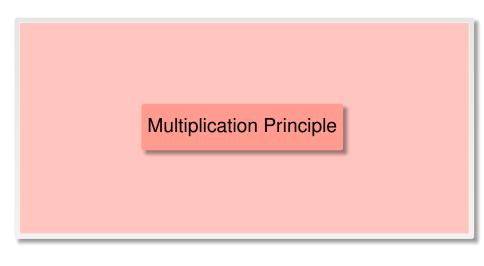
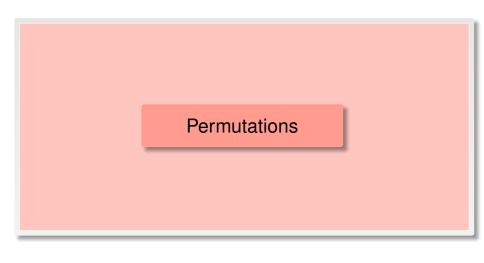
# STAT 320: Principles of Probability Unit 2: A Few Counting Principles & and Their Applications

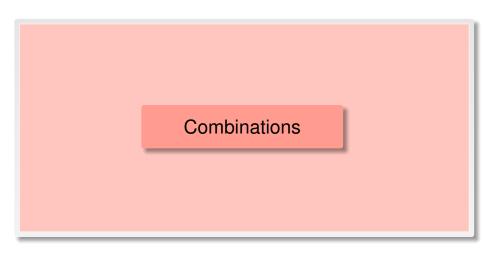
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### Outline







## Binomial and Multinomial Coefficient

### Overview of Counting Principals

#### Definition (Multiplication Principle of counting)

Suppose that two experiments are to be performed. Then if experiment 1 can result in any one of m possible outcomes and if, for each outcome of experiment 1, there are n possible outcomes of experiment 2, then together there are  $m \times n$  possible outcomes of the two experiments.

