

STAT 320: Principles of Probability

Unit 2: A Few Counting Principles & and Their Applications

United Arab Emirates University

Department of Statistics

Outline

Multiplication Principle

Permutations

Combinations

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.

Questions?