

AP Statistics
Chapter 6

6.1 Discrete and Continuous Random Variables

DEFINITION: Random variable and probability distribution

DEFINITION: Discrete random variable

Probability Distribution for a Discrete Random Variable

DEFINITION: Mean (expected value) of a discrete random variable

DEFINITION: Variance and standard deviation of a discrete random variable

DEFINITION: Continuous random variable

How to find Probabilities for a Continuous Random Variable

6.2 Transforming and Combining Random Variables

The Effect of Adding or Subtracting a Constant on a Probability Distribution

The Effect of Multiplying and Dividing by a Constant on a Probability Distribution

The Effect of a Linear Transformation on a Random Variable

Mean (Expected Value) of the Sum of Random Variables

Mean (Expected Value) of the Difference of Random Variables

DEFINITION: Independent random variables

Standard Deviation of the Sum of Independent Random Variables

Standard Deviation of the Difference of Independent Random Variables

Mean and Standard Deviation of a Linear Combination of Random Variables

Combining Normal Random Variables

6.3 Binomial and Geometric Random Variables

DEFINITION: Binomial setting

DEFINITION: Binomial random variable and binomial distribution

DEFINITION: Binomial coefficient

Binomial Probability Formula

How to Find Binomial Probabilities (with and without technology)

Describing a Binomial Distribution

Mean (Expected Value) of a Binomial Random Variable

Standard Deviation of a Binomial Random Variable

DEFINITION: 10% Condition

**Normal Approximation for Binomial Distributions:
The Large Counts Condition**

DEFINITION: Geometric Setting

DEFINITION: Geometric random variable and geometric distribution

Geometric Probability Formula

Describing a Geometric Distribution

Mean (Expected Value) and Standard Deviation of a Geometric Random Variable