

AP Statistics  
Chapter 7

7.1 What is a Sampling Distribution

**DEFINITION: Parameter, statistic**

**DEFINITION: Sampling variability**

**DEFINITION: Sampling distribution**

**Population distribution**

**Distribution of sample data**

**DEFINITION: Unbiased estimator**

**Variability of a Statistic**

## Choosing an Estimator

## 7.2 Sample Proportions

### DEFINITION: Sampling Distribution of the Sample proportion $\hat{p}$

### Sampling Distribution of a Sample Proportion

Using the Normal Approximation for the Sampling Distribution of  $\hat{p}$

The sampling distribution of  $\hat{p}_1 - \hat{p}_2$

### 7.3 Sample Means

**DEFINITION:** Sampling distribution of the sample mean  $\bar{x}$

**Mean and Standard Deviation of the Sampling Distribution of  $\bar{x}$**

## Sampling Distribution of a Sample Mean from a Normal Population

### DEFINITION: Central Limit Theorem (CLT)

**Shape of the sampling distribution of the sample mean**

**The sampling distribution of  $\bar{x}_1 - \bar{x}_2$**