

## Section 5.2 IRA Guide

### **Introduction**

Screen 1: List of Objectives

#### **Objective 1: Use the Addition Rule for Disjoint Events**

Screen 1: Watch the video that introduces the addition rule and disjoint events. The video is 7 minutes long, so you may want to try reading this material in my pointers and see how you do with the examples/problems for the addition rule for disjoint events. If you struggle then you can go back and watch this video.

Screen 2: Example 1 shows how to use the addition rule for disjoint events. Watch the By Hand video solution.

Screen 3: Example 2 is another example of this rule. It is a good idea to have a deck of cards handy for this example, especially if you are not familiar with a standard deck of cards. Watch the By Hand video solution.

Screen 4: This problem is based on Example 1 on Screen 2.

#### **Objective 2: Use the General Addition Rule**

Screen 1: Explanation of the **General Addition Rule** as well as its formula. This formula can still be used when two events are disjoint by substituting 0 for  $P(E \text{ and } F)$ . This is a formula you should memorize.

Screen 2: Example 3 shows how to use the general addition rule with another card example. Watch the By Hand video solution, and keep your deck of cards handy.

Screen 3: This problem is based on Example 3 on the previous screen. Be careful when reducing your fractions to lowest terms.

Screen 4: This is an explanation of a contingency table. Try to become familiar with the terminology.

Screen 5: Example 4 shows how to use the addition rule when you have a contingency table. Watch the By Hand video solution.

Screen 6: This problem is based on Example 4 on the previous screen.

#### **Objective 3: Compute the Probability of an Event Using the Complement Rule**

Screen 1: Definition of a **Complement** and the **Complement Rule**. Make note of the notation for the complement of an event.

Screen 2: Example 5 shows how to use the complement rule. Watch the short By Hand video solution.

Screen 3: This problem involves the complement of an event, as well as the classical method.

Screen 4: Example 6 shows how the complement rule can save both time and effort when computing probabilities. Watch the By Hand video solution.

Screen 5: This problem is based on Example 6 on the previous screen.

Screen 6: End of Section