

## **IRA Guide 10.3**

### ***Introduction***

Screen 1: I have deleted the problem based on the sampling distribution of the sample mean from this assignment. You will see a blank screen.

Screen 2: Quick summary of the t-distribution.

Screen 3: This exercise goes over the creation of a probability model. Divide each frequency by the total of the frequencies. (You can hack this by making a relative frequency bar plot in StatCrunch.)  
[Section 5.1]

Screen 4: This exercise has you compute a confidence interval for a population mean, as was covered in Section 9.2. Use StatCrunch for this (Stat > t-statistics > one-sample > summary).

Screen 5: List of Objectives

### ***Objective 1 – Test Hypotheses about a Mean***

Screen 1: Some background material for the one-mean test, give it a quick read.

Screen 2: Read through the 5 steps for the one mean test. Check out the video at the top of the screen.

Screen 3: Before beginning one of these tests you need to check that the population must be normal (QQ Plot in StatCrunch) and have no outliers (Boxplot in StatCrunch). We will use StatCrunch to compute P-values, just like for the one proportion test.

Screen 4: Example of a one mean test using summary information (not data). Be sure to watch the StatCrunch solution video to see how the calculations should be done.

Screen 5: This exercise is based on Example 1 on the previous screen. Be sure to use StatCrunch when computing the P-value.

Screen 6: Example of a one mean test using data. Be sure to watch the StatCrunch solution video to see how the calculations should be done, as well as how to check that the conditions are satisfied.

Screen 7: This exercise is based on Example 2 on the previous screen. Be sure to use StatCrunch when computing the P-value.

### ***Objective 2 – Explain the Difference between Statistical Significance or Practical Significance***

Screen 1: Definition of Practical Significance

Screen 2: One more example of a one mean test, showing that statistical significance does not necessarily mean practical significance. Be sure to watch the StatCrunch video solution.

Screen 3: Quick summary of why the previous example did not demonstrate practical significance. Be sure to watch the Caution video.

Screen 4: This exercise is based on Example 3 on the previous screen.

Screen 5: End of Section