

Section 13.1 - IRA Guide

Introduction

Screen 1: I have deleted the problem on “Completely Randomized Design” – you should see a blank screen.

Screen 2: Review – H_0 & H_1 , Type I & Type II Errors (Section 10.1)

Screen 3: Review – Two Mean Hypothesis Test (Section 11.3)

Screen 4: List of Objectives

Definition of ANOVA test, which is used to test the equality of 3 or more means. Take a good luck at the null and alternative hypotheses, and watch the “In Other Words” video.

Screen 5: Background information, skim through it.

Screen 6: A quick explanation about why we do not perform several two mean tests. Skim over this.

Screen 7: More ANOVA background. Skim through it.

Objective 1 – Verify the Requirements to Perform a One-Way ANOVA

Screen 1: The 4 requirements are listed.

Screen 2: A shortcut for verifying the requirement for equal population variances.

Screen 3: Example 1 shows how to verify the requirements for ANOVA. Be sure to watch the StatCrunch video solution.

Objective 2 – Testing a Hypothesis Regarding Three or More Means Using One-Way ANOVA

Screen 1: Watch the video so you understand the concept of ANOVA.

Screen 2: This exercise is based on the video on the previous screen.

Be sure that you have watched/taken notes/understood that video, because you ONLY GET ONE CHANCE with these questions.

Screen 3: This video shows how to compute the test statistic by hand. You can skip this one because we will use StatCrunch to calculate it.

Screen 4: A summary of terms associated with the calculation of the test statistic – you can skip this too.

Screen 5: Steps for computing the F-Test statistic by hand. You can do this with StatCrunch by following Example 3 on screen 10.

Screen 6: Example 2 shows how to compute the test statistic by hand. You can work along with this if you'd like, but I recommend looking at the StatCrunch procedure that is shown in Example 3 (Screen 10) and use that instead.

Screen 7: I have deleted the exercise on this screen, so you should just see a blank screen.

Screen 8: Summary of Example 2 – you can skip this.

Screen 9: Presentation of an ANOVA Table, which StatCrunch will generate for us. Also a quick explanation about making the decision about H_0 in an ANOVA test.

Screen 10: Example 3 shows how to perform ANOVA using technology (StatCrunch). Be sure to watch the StatCrunch video solution.

Screen 11: Summary of visual evidence from Example 3 on previous screen.

Screen 12: This exercise is based on Example 3 on Screen 10.

Screen 13: Quick explanation of what we can do after ANOVA.

Screen 14: SKIP

Screen 15: SKIP

Screen 16: End of Section