

Section 7.3 IRA Guide

Introduction

Screen 1: Start by making a histogram from the data using StatCrunch, and find the graph that comes closest to what you created. In the second part you have to determine the shape of the distribution. (You may want to review skewed left, skewed right, ...) [Section 2.2]

Screen 2: Correlation – You should go over the definitions of explanatory and response variables. You can make the scatter plot using StatCrunch (Graph > Scatter Plot). Compute the correlation coefficient in StatCrunch (Stat > Summary Stats > Correlation). [Section 4.1]

Screen 3: List of Objective

Introduction to the concept of normality, which is a way to determine whether a set of data is normally distributed.

Objective 1: Use Normal Probability Plots to Assess Normality

Screen 1: You can read about normal probability plots here, but DO NOT DO THESE BY HAND.

Screen 2: Since we will do these using StatCrunch, you can skip this page.

Screen 3: Decent background information. You should become familiar with Table VI (there's a link here). Basically, when we create a normal probability plot using StatCrunch it will compute a correlation statistic. If that statistic is greater than the critical value from Table VI then we say that the data comes from a population that's normally distributed.

Screen 4: Example 1 shows how to do this by hand – you can skip this.

Screen 5: Explanation that you should be using StatCrunch, not doing the normal probability plot by hand.

Screen 6: Example 2 is the same as Example 1, but shows how to do it with technology. WATCH THE STATCRUNCH VIDEO.

Screen 7: Example 3 is another normal probability plot example, this time with much more data. WATCH THE STATCRUNCH VIDEO SOLUTION. You can work the problem along with the video by copying the data into StatCrunch.

Screen 8: This problem is based on Examples 2 & 3. Create the normal probability plot using StatCrunch (Graph > QQ Plot).

Screen 9: End of Section