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STAT 401 - Assignment 9

Due Date: December 2nd, 2020

Data Description and Background

The data you will be analyzing are on educational test scores for a sample of Irish schoolchildren aged 11 in 1967. Focus on the variable DVRT (Drumcondra Verbal Reasoning Test Score) only. Make sure that when you do your analysis you are analyzing this variable and not another mistakenly.

Using the data provided, answer the following questions and provide the requested analysis.

1) What is the sample size? – ½ pt

Sample size: 470

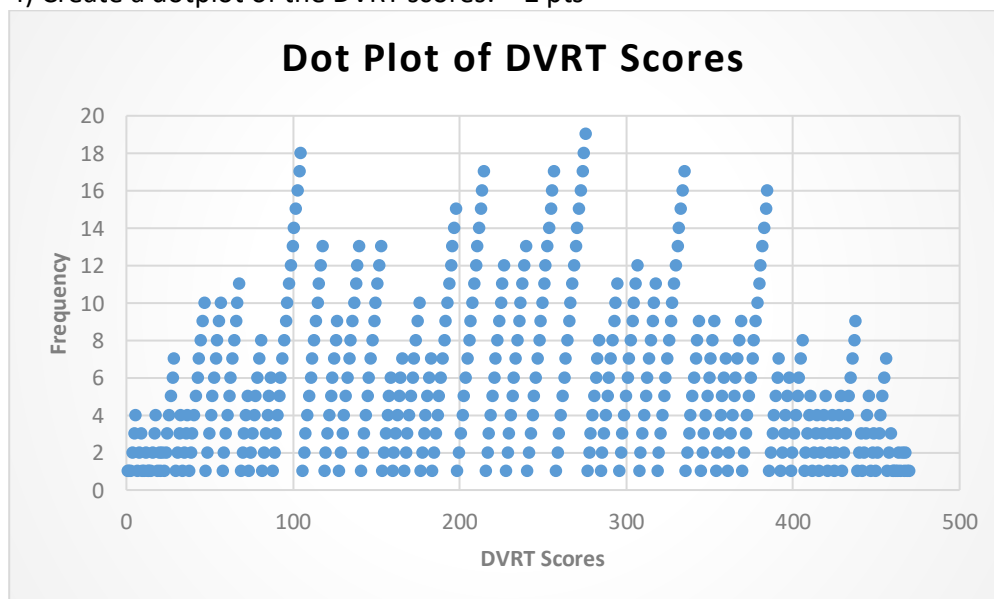
2) Calculate the sample average of the DVRT scores. – ½ pt

102.0766

3) Calculate the sample standard deviation of the DVRT scores.? – ½ pt

13.86773

4) Create a dotplot of the DVRT scores. – 2 pts



5) Based on the dotplot you constructed in part 3, is it plausible to assume the distribution of DVRT score follows a Normal distribution? – ½ pt

From the dot plot of DVRT scores, we see that the dot plot has the highest vertical column in the center and the shape is roughly symmetric like that of a normal distribution with a few exceptions here and there. So we may assume that the distribution of DVRT score follows a Normal distribution.

6) Construct a 95% Confidence Interval for the mean DVRT scores in the population. – 1 pts

Margin of Error 1.256975

Confidence interval for mean DVRT score = $\bar{x} \pm E$

\bar{x} 102.0766

Lower Limit of Confidence Interval 100.8196

Upper Limit of Confidence Interval 103.3336

Confidence Interval for mean DVRT score = (100.8196 , 103.3336)