Minitab Activity 3 MTH 245

1. The first statistical analysis you will do is to find the descriptive statistics for each column. You need to find the mean, median, mode, variance, standard deviation, min, max, first quartile, third quartile, and the sample size for each column. There is a video in Canvas that shows you how to do this if you need it. Paste the table with the descriptive statistics below.
2. Remember from Activity 2, the true mean of this scenario is and the true standard deviation is . Carefully examine the table with the descriptive statistics. Consider the mean and median of each die. Are there any means that seem to be higher or lower than they should be? Is there a difference between the mean and median for any of the samples? Are any of the standard deviations or variances for any of the dice different than they should be? After having carefully considered the data and knowing these parameters, which one of the dice is definitely fair? Paste the descriptive statistics for only that die below.
3. Next use the descriptive statistics menu to find the boxplots and individual value plots for each of the dice. Compare and contrast the boxplot of D1 to any of the other dice. (You may want to use the die you found in question 2.) What do you see? Compare and contrast the interval value plot of D1 to any of the other dice. What do you see? Paste the boxplot and interval value plot of D1 and the die you chose to compare it to below.

Based on these graphs, do you think D1 is fair or unfair?

1. Now use the graph builder to create a graph that contains all the boxplots. Paste the graph below.

Considering the graph of all the boxplots side by side, are there any dice you think are unfair?

1. Now use Minitab to find the 95% confidence intervals for each of the samples. Paste your output below.

How can you use the confidence intervals and to decide if any of the samples shows an unfair die? Using this idea which of the die is unfair? (There may be more than one.)

1. Provide a quick summary of the die or dice you found to be unfair and your reasoning for deciding this.