Minitab Activity 4

1. Find the descriptive statistics for each of the dice. (You can include them all in the same table) Include the mean, median, mode, and standard deviation. Paste your results here.
2. Which of these dice do you think might be unfair? Choose at least one. Give a reason based on the values in the descriptive statistics for choosing the die or dice.
3. Calculate the 95% confidence intervals for all the samples then paste the output below. Write the true mean (µ) for a 6-sided die below. If you do not remember, look back at the sampling distribution activity.
4. Examine each of the confidence intervals and decide if the true mean for a 6-sided die is in the interval. If the true mean is in the interval, what do you think this indicates? If the true mean is not in the interval, what do you think this indicates?
5. Using , have Minitab perform the hypothesis tests for the ones that you think might be unfair. Paste your results below.
6. For each of the dice that you performed a hypothesis test for above, does the evidence suggest unfair or fair? Make sure to include the p-value and what it indicates for each die.
7. Now you will do a further analysis on the remaining dice that you did not include as unfair in question 6. You will be doing directional hypothesis tests (alternative > or alternative <). If the sample mean for a die is above the true mean µ, perform a right-tailed hypothesis test at the level of significance. If the sample mean for a die is below the true mean µ, perform a left-tailed hypothesis test at the level of significance. Paste your results below.

1. Do your results from Minitab suggest that any of these dice are unfair? Make sure to include the p-value for each die and make a statement about the die being fair or unfair based on the p-value.