1.8 TASK: Trivia Night

Name:

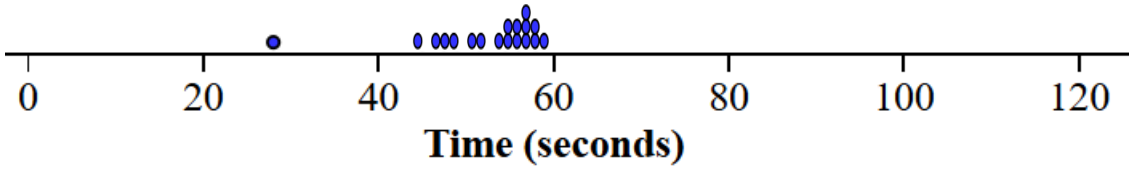
Triple T Trivia hosts weekly trivia nights, and the final "Showdown Round" question comes with a 60-second time limit. The host wants to know how teams typically perform on this question before deciding whether the time limit should change. Before collecting any data, the host poses the following investigative question:

"How long does it typically take a team to submit their final answer during the Showdown Round?"

The host records how long, in seconds, it took each of 18 teams to submit their final answer. The dotplot and summary statistics below shows the results.

Summary Statistics for 60 Second Showdown Round

n	$\bar{x}$	s	Min	Q1	Median	Q3	Max
18	52.33	7.37	28	49	55	57	59

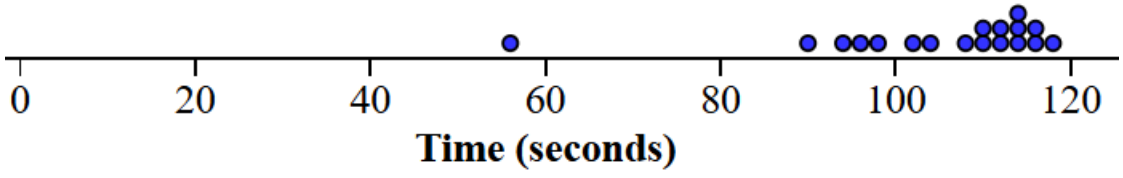


1. Determine if 28 is an outlier. Justify.

2. Draw a boxplot directly above the dotplot above.

3. Is it possible to have an outlier above the upper fence in this scenario.

4. Triple T is thinking about doubling the Showdown Round from 60 to 120 seconds. To predict what the new results might look like, Triple T simply doubles every value in the original data set. Results are shown in dotplot below.



Summary Statistics for 120 Second Showdown Round

n	$\bar{x}$	s	Min	Q1	Median	Q3	Max

5. Draw the boxplot for 120 second showdown round above the dotplot above.

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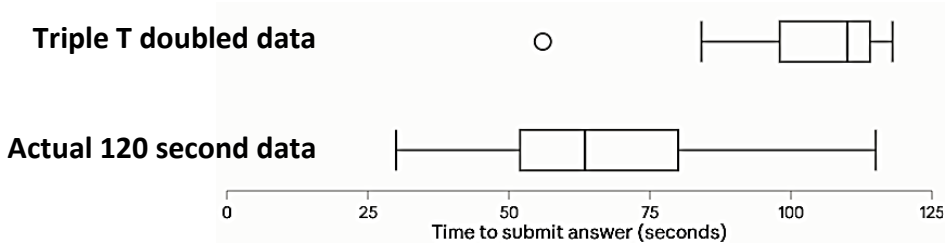
6. How did the difference between Mean and Median change from 60 second showdown to 120 second showdown.

7. Is the outlier for 60 second showdown still an outlier for 120 second showdown? Justfiy.

8. Compare the variability of a 60 second showdown with 120 second showdown.

9. Explain why simply doubling the original data is not a reliable way to predict how teams would actually perform with a 120-second time limit.

10. Compare the boxplot of Triple T's bad idea doubled-data prediction to the boxplot of the actual 120-second results below. Which distribution has more variability? What does that mean in this scenario



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