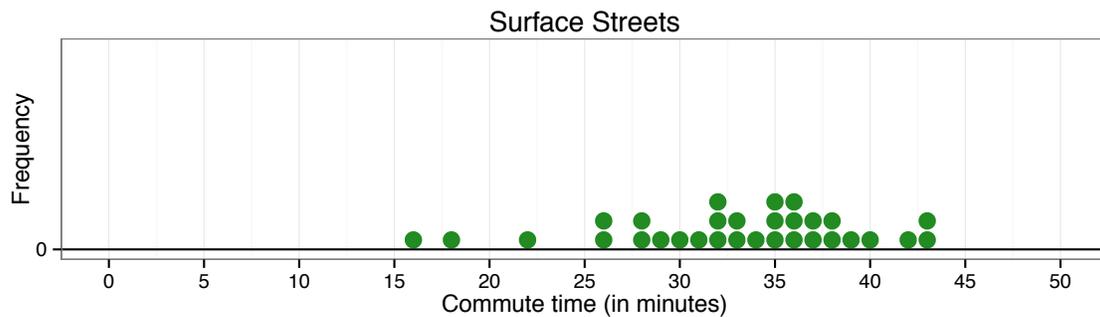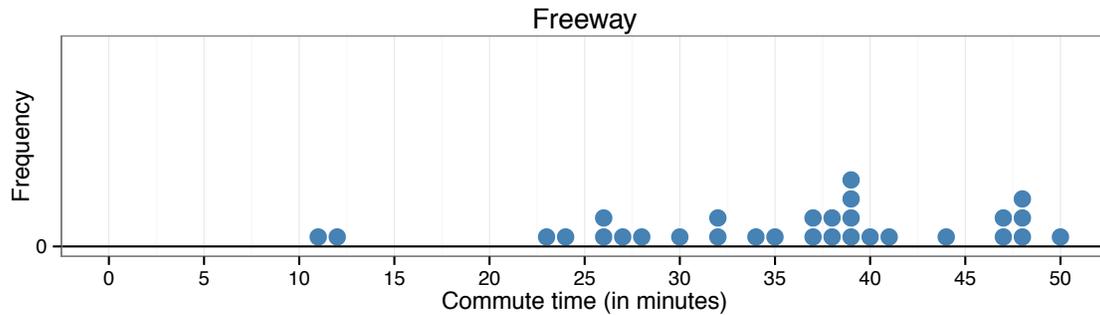Name: Date:

Comparing Commute Times with Dotplots

Background:

A Data Science student rides in a car on her way to school. On some days, she takes the surface streets, and on other days she takes the freeway. She decides to collect data about the length of time it takes her to commute to school by taking the surface streets versus taking the freeway. The dotplots below show the distribution of each method of her commute.

Freeway

Commute time (in minutes)

Surface Streets
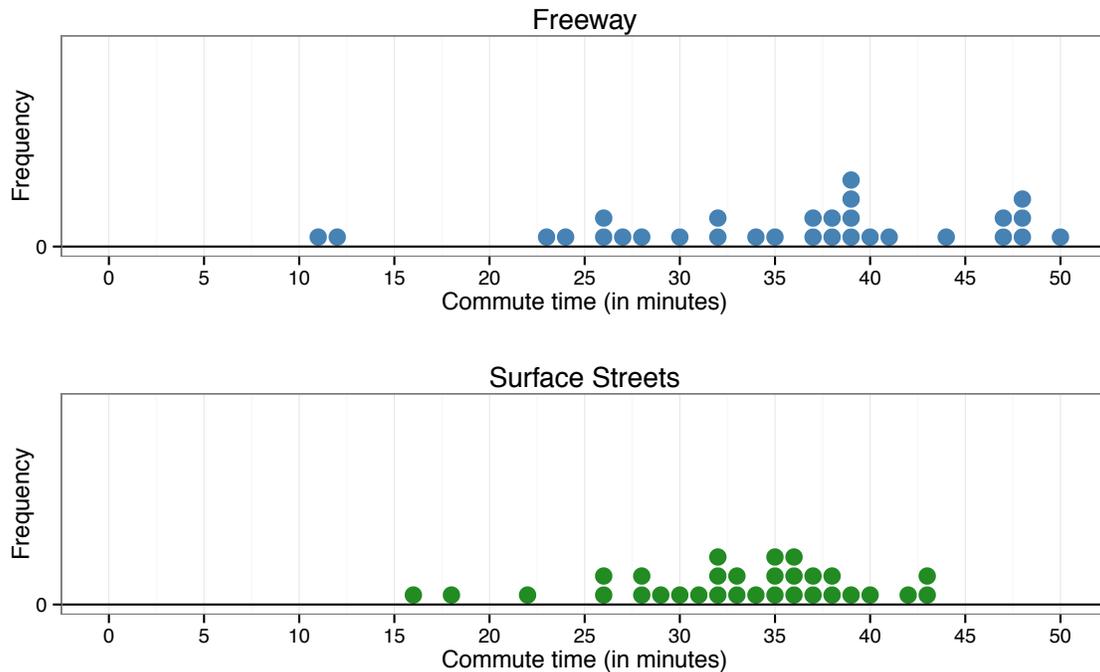

Commute time (in minutes)

Question:

Based on the dotplots, which method of commute would you recommend to this student – surface streets or the freeway? Use your knowledge of shape, center, and spread to justify your recommendation.

Comparing Commute Times with Dotplots

Answer Key

Background:

A Data Science student rides in a car on her way to school. On some days, she takes the surface streets, and on other days she takes the freeway. She decides to collect data about the length of time it takes her to commute to school by taking the surface streets versus taking the freeway. The dotplots below show the distribution of each method of her commute.

Freeway

Surface Streets

Question:

Based on the dotplots, which method of commute would you recommend to this student – surface streets or the freeway? Use your knowledge of shape, center, and spread to justify your recommendation.

Sample Argument for Freeway

min: 11, Q1: 28, Median: 37.5, Q3: 41, Max: 50

- *You could get to work in a little as 11 minutes or 12 minutes which never happened on surface streets.*

- *25% of your commute times would be 28 minutes or less*

Sample Argument for Surface Streets

min: 16, Q1: 29, Median: 34, Q3: 37, Max: 43

- *The longest it took to get to work was 43 minutes on surface streets but on the freeway 7/31=23% of the commute times took longer than 43 minutes.*

- *75% of your commute times were 37 minutes or less*

Comparing Commute Times with Dotplots

- *The median commute time was 34 minutes on the surface streets compared to 37.5 minutes on the freeway*

- *There was less variability in the distribution of surface street commute times since the range was 27 minutes compared to 39 minutes*

- *There was less variability in the distribution of surface street commute times since the interquartile range was 8 minutes compared to 13 minutes*