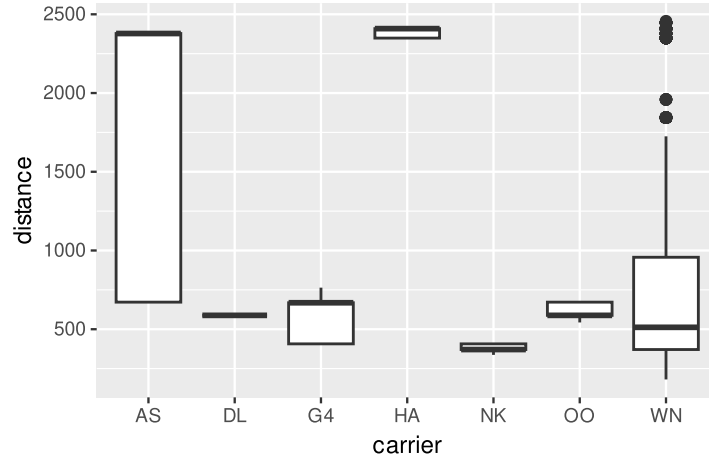


Below is a smaller version of the data from a future lab called `flights_mini`. It contains all flights out of Oakland (OAK) from December 2020. This data frame is used to create the plot that follows. `distance` refers to the distance a given plane travels on its flight, measured in miles. `carrier` refers to the carrier code for a specific airline.



- Which of the following interpretations of the plot above are true? (select all that apply)
  - (A) The carrier with the most heavily skewed distance distribution is HA.
  - (B) The median distance of the flights operated by DL, G4, and OO are roughly equivalent.
  - (C) The minimum distance traveled in this data set is roughly 200.
  - (D) The carrier with the greatest variability in distance, as measured by the IQR, is AS.

Consider the small data set from the notes.

6 7 7 7 8 8 9 9 10 11 11

- The data set above was measured in meters, but what would have happened if it had been measured in decimeters (10 decimeters to a meter)? Provide reasoning for would happen to the measures of center - mean, median, mode - if it had instead been measured in decimeters. Repeat the exercise for three measures of spread: range, standard deviation, and IQR. Which measures remain the same after a multiplicative change in units?

3. Sketch your best sense of the distribution of the following variable(s). For each, please:
- i. Use a form of statistical graphic that emphasizes the important elements of the distribution.
  - ii. Label the axes and provide plausible values for the tick marks.
  - iii. Describe in words the shape of the distribution.
  - iv. State which measure of center and spread would be most appropriate and approximate their values.

Make a note of any assumptions you're making in interpreting these variable names.

*Number of body piercings among Stat 20 students*

*Scores on an easy quiz among Stat 20 students*