



Cornell Notes

Topic: Box-and-Whisker Plot: Lesson 10.4

Name: _____

Date: _____

Period: _____

Essential Question: **How can you use quartiles to represent data graphically?**

Questions/Main Ideas:

Notes:

Vocabulary

Box-and-Whisker Plot- a data set along a number line by using the least value, the greatest value, and the quartiles of the data.

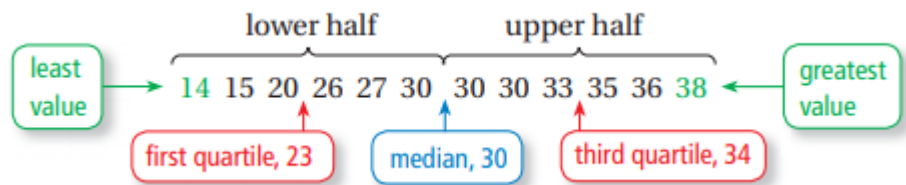
Five-number summary- make up the box-and-whisker plot (*Order numbers, Find median, Find First Quartile, Find Third Quartile, Find Least and Greatest Values*)

Example 1

Making a Box-and-Whisker Plot

Steps

- 1.) Order the data from Least (<) to Greatest (>).
- 2.) Find the Median. (Middle)
- 3.) Find the First Quartile. (Middle of Lower half)
- 4.) Find the Third Quartile. (Middle of Upper half)
- 5.) Draw a box using the quartiles.
- 6.) Draw WHISKERS from the box to the Least (<) and Greatest (>) values.

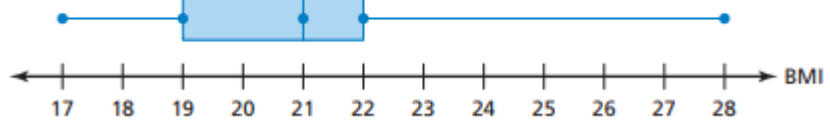


Your Turn!

A group of friends spent 1, 0, 2, 3, 4, 3, 6, 1, 0, 1, 2, and 2 hours online last night. Make a box-and-whisker plot for the data.

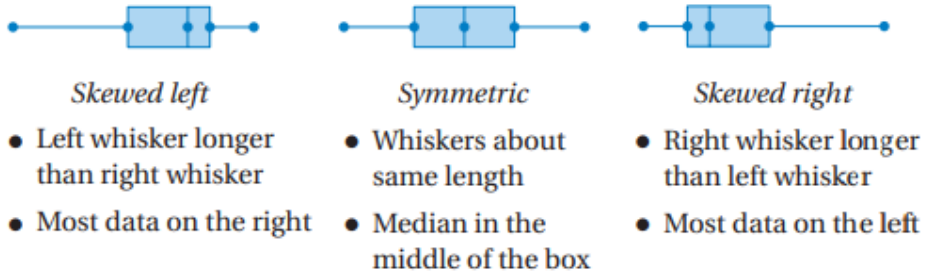
Example 2 Analyzing a Box-and-Whisker Plot

The box-and-whisker plot shows the body mass index (BMI) of a sixth grade class.



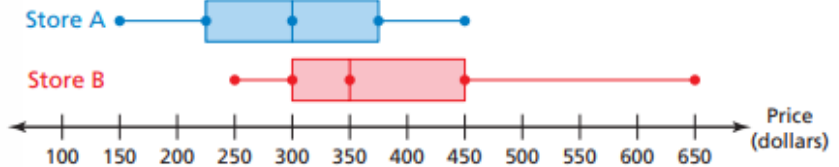
- a. What fraction of the students have a BMI of at least 22?
- b. Are the data more spread out below the first quartile or above the third quartile? Explain.
- c. Find and interpret the interquartile range of the data.

Shapes of Box-and-Whisker Plots



Example 3 Comparing Box-and-Whisker Plots

The double box-and-whisker plot represents the prices of snowboards at two stores.



- a. Identify the shape of each distribution.
- b. Which store's prices are more spread out? Explain.

Summary: Students should write a summary reflecting the above essential question.