

Summarizing Quantitative Data: Part 2

- Topic: Quantitative Data
- Objective: Students will be able to calculate the mean, median, and mode of a data.
- Standards: AP Stats: UNC-1 (EU), UNC-1.K (LO), UNC-1.K.2 (EK)
- CCSS Math: 6.SP.A.3, 6.SP.B.5, 6.SP.B.5c, 6.SP.B.5d

Summarizing Quantitative Data

- Mean **Avg., Arithmetic Mean**
(Add & Divide)
- Median **Middle**
- Mode **Most Often**

$$\sum x^2$$

- Example: Given the following test scores from a class, find the mean, median and mode of the data.

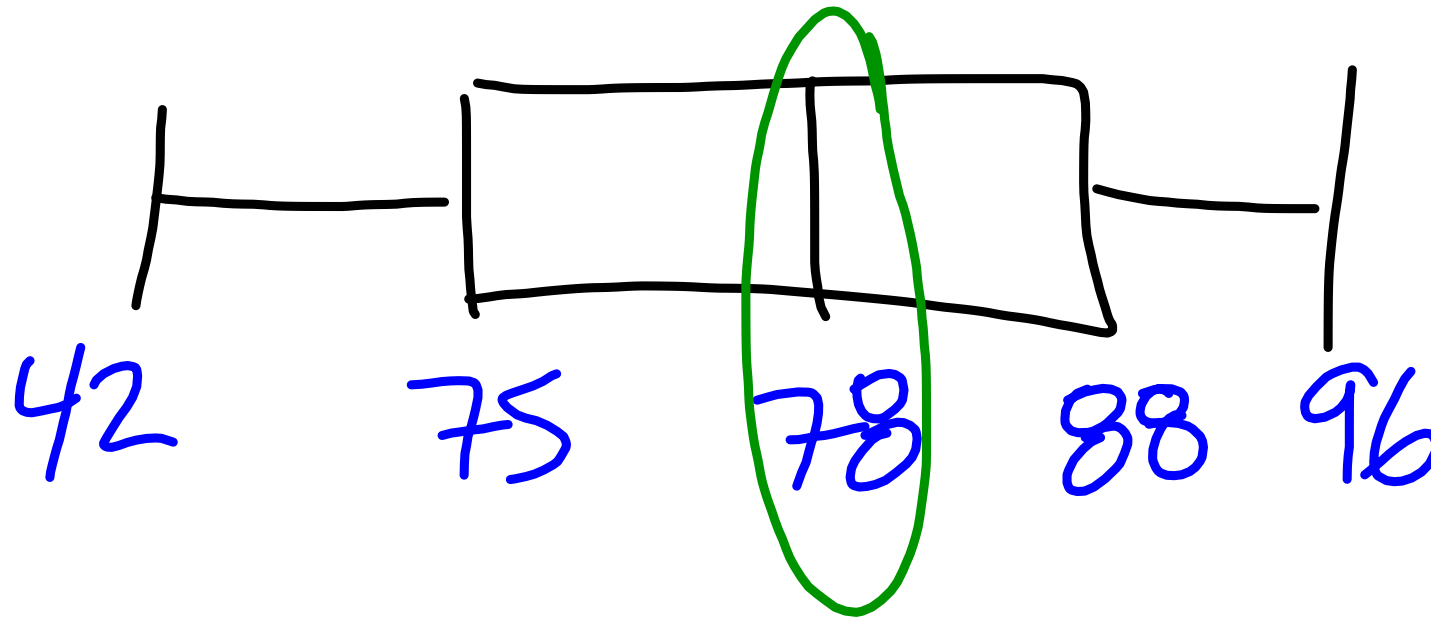
Test Scores: 96, 78, 88, 75, 42, 78

Mean: 76.2

Median = 78 Mode: 78

Sample Sx } S.D.
All σx }

Box + Whisker Plot



Summarizing Quantitative Data

- Effects of shifting, adding, & removing a data point.
- Example: Given the following test scores from a class, what happens to the mean, median and mode of the data if you remove the lowest score?

Test Scores: 96, 78, 88, 75, ~~42~~, 78

Mean:

83 up

Median:

78 same

Mode:

78 same

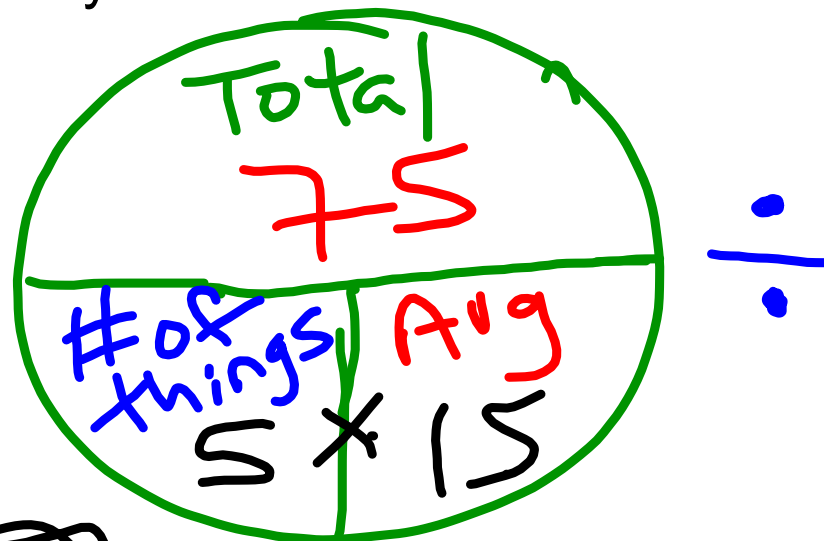
Summarizing Quantitative Data

- Missing Value Given the Mean

Average
Wheel

- Example: The following is a table of the number of fire hydrants in each neighborhood overseen by Fire District 19:

	Neighborhood	Number of fire hydrants
1	Clearwater Estates	- 17
2	Shamrock Oak	- 15
3	Hidden Village	- 21
4	Tower Terrace	- 12
5	Prairie Pass	10 ?

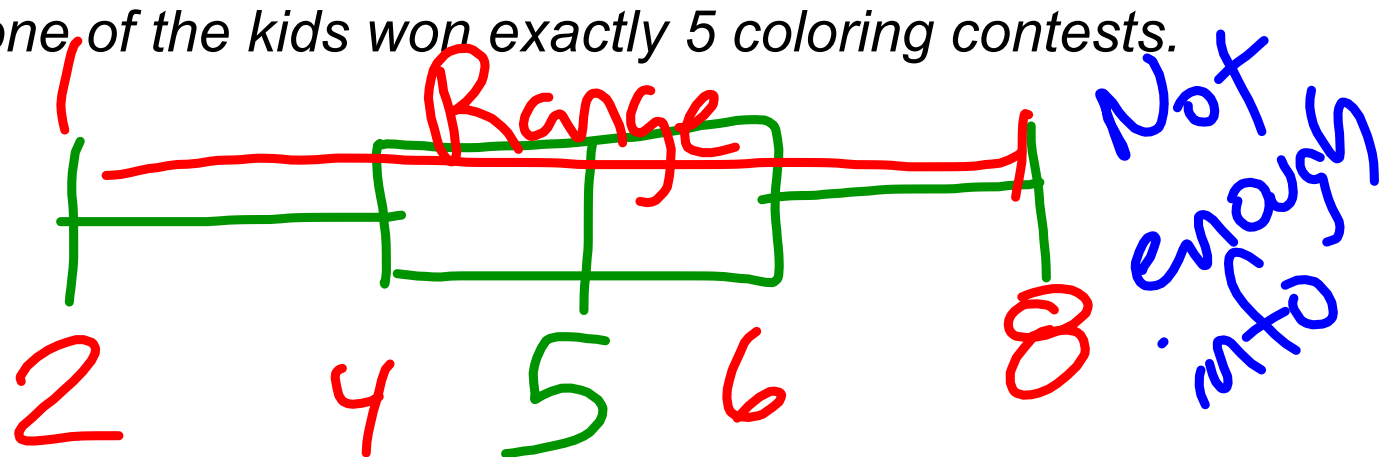


If the mean of the data set is 15 fire hydrants, find the number of fire hydrants in Prairie Pass.

Summarizing Quantitative Data

- Median & Range Puzzlers

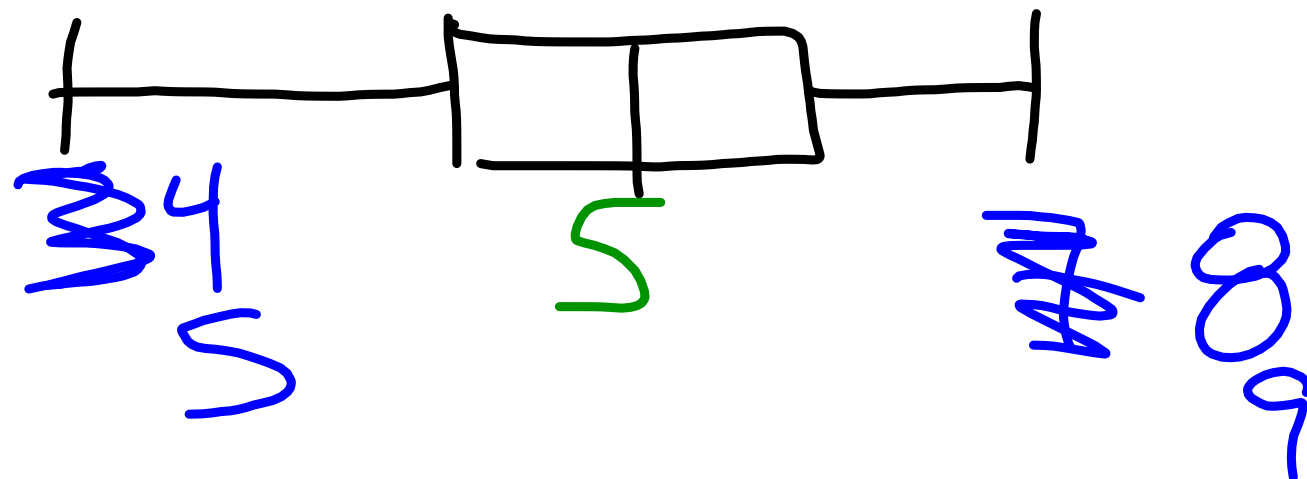
- The median number of coloring contests won by 4 kids in a certain year is 5. The range of number of contests won by those kids that year is 6.
- Determine if the following statement is true, is false, or does not contain enough information.
- At least one of the kids won exactly 5 coloring contests.*



Summarizing Quantitative Data

- Median & Range Puzzlers

- The median number of goals scored by 7 players in a certain soccer season is 5. The range of the number of goals scored by those players that season is 4.
- Determine if the following statement is true, is false, or does not contain enough information.
- *One of the players could have scored 5 more goals than another player.*



Displaying and Comparing Quantitative Data

You should be working on the following skills:

1. Shape of distributions
2. Clusters, gaps, peaks, and outliers
3. Comparing distributions
4. Comparing data displays
5. Comparing data distributions
6. Comparing center and spread

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