

Measures of centre and spread



Read the mode, median, and range off each dot plot, then calculate or reason with the mean.

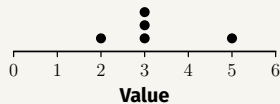
Name _____

Date _____

Reading a dot plot

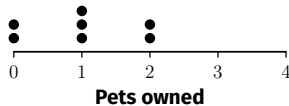
On a dot plot, the **mode** is the tallest stack, the **median** is the middle dot (or the average of the two middle dots, if there's an even number), and the **range** is the distance from the first to the last occupied value. The **mean** must still be calculated: add every value and divide by how many there are. Always name the specific measure – avoid the word “average” on its own.

Worked example Find the mode, median, and range of this data set.



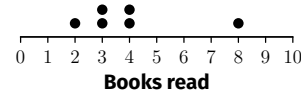
Mode: 3 (tallest stack). Median: 3 (middle of 5 values).
Range: $5 - 2 = 3$.

1. Find the mode, median, and range of this data set (pets owned by 7 families).



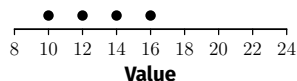
Working

2. Calculate the mean number of books read.



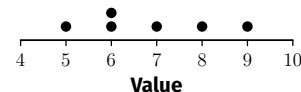
Working

3. These 4 values plus one more give a mean of 15. Find the missing value.



Working

4. Explain how to find the median of these 6 values (an even number).



Working

Measures of centre and spread (continued)

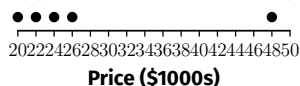


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Name _____

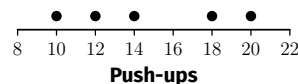
Date _____

5. Calculate the mean and median. Which better represents a typical value, and why?



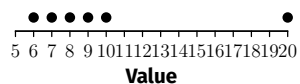
Working

6. What is the range? What does it tell you about consistency between these 5 students?



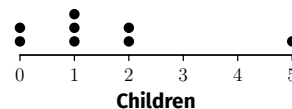
Working

7. By how much does the mean change if the outlier (20) is removed?



Working

8. A report says "the average family has 1.5 children." Which measure is 1.5? What are the median and mode?



Working
