

Measures of Center: Classwork

1. Ally surveyed her friends to find out how many DVDs they own. She collected the data on the right:

10	11	14	18	19	25
25	26	27	27	27	104

- Find the mean of the data set. Show your work.
- Find the median of the data set.
- Find the mode(s) of the data set.
- Are there any outliers in the data? If so, what?
- What is the range of the data?
- Suppose we removed the outlier. Find the new mean and median.

Which was affected by the outlier more – the mean or the median?

2. Austin surveyed his friends to find out how many letters are in their last name. He collected the data on the right:

How Many Letters in Your Last Name?							
				X			
	X	X					
	X	X			X		
	X	X	X	X			
X	X	X	X	X	X		X
4	5	6	7	8	9	10	11

- Find the mean of the data set. Show your work.
- Find the median of the data set.
- Find the mode(s) of the data set.
- Are there any outliers in the data? If so, what?
- What is the range of the data?
- Suppose a new data value is added for Marco Strombroliaattoriumus. What would be the new mean? The new median?

Which was affected by the outlier more – the mean or the median? Why?

3. Two students are comparing their math quiz scores. Each quiz was out of 30 points.

Dez's scores: 27, 29, 30, 28, 11, 5, 30

Trish's scores: 27, 25, 25, 22, 25, 24, 25

- a. Suppose they were using the mean of their scores to compare. Which student did better?
 - b. Suppose they were using the median of their scores to compare. Which student did better?
 - c. Suppose they were using the mode of their scores to compare. Which student did better?
 - d. Which measure of center gives the most accurate summary of the numbers? Explain.
4. Make up a set of eight data values (each different) that has a mean of 10.
Hint: what do they need to add up to?
5. Make up a set of five data values (each different) that has a mean of 8.4.
Hint: what do they need to add up to?
6. The mean of the numbers 5, 3, 3, 9, 8, 7, 2, and x is 5. Find the value of x . Show your work.
7. The mean of the numbers 37, 11, 42, 28, 30, and m is 34. Find the value of m . Show your work.
8. Find the mean of: $4x$, $7x$, x , $6x$, $8x$, and $-2x$. Show your work.

Measures of Center: Homework

9. Nelson took a poll to see how many times per month the average student ate hamburgers. They collected the following data and put it in the line plot on the right.

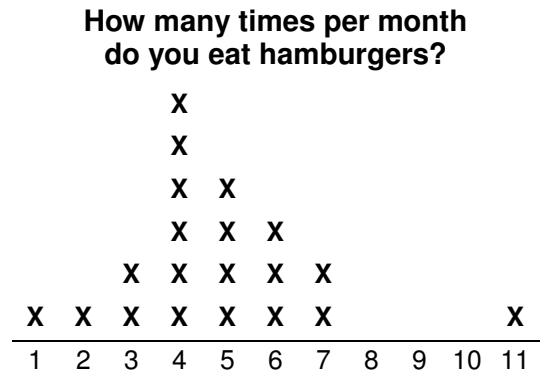
a. Find the mean of the data set. Show your work.

b. Find the median of the data set.

c. Find the mode(s) of the data set.

d. Are there any outliers in the data? If so, what?

e. What is the range of the data?



10. Solve the following inequalities and graph each solution. All answers will be whole numbers

a. $-4x + 16 > 48$

b. $\frac{x}{-7} - 8 \geq 9$