

C12L1 Notes

Measures of Central Tendency

Mean – the average of a set of numbers

Median – the middle number of a set of numbers in ascending order

Mode – the number that occurs the most in a set of numbers

Range – the difference in the largest value and the lowest value of a set of numbers

Find the mean, median, mode, and range of the following set of numbers.

1. ~~24, 14, 5, 19, 6, 7, 29, 34, 14~~ 5, 6, 7, 14, 14, 19, 24, 29, 34
MED

Mean = 16.9

Median = 19

Mode = 14

Range = 29

$$\text{MEAN} = \frac{\text{SUM OF \#s}}{\text{\# OF TERMS}} = \frac{152}{9} \approx 16.9$$

$$\text{RANGE} = \text{LARGEST} - \text{SMALLEST} = 34 - 5 = 29$$

2. ~~5, 12, 14, 27, 13, 39, 12, 12~~ 5, 12, 12, 12, ^{MEDIAN} 13, 14, 27, 39

Mean = 16.75

Median = 12.5

Mode = 12

Range = 34

IF THERE IS NO MIDDLE TERM, AVERAGE THE 2 MIDDLE \#s.

$$\text{MEAN} = \frac{134}{8} = 16.75$$

$$\text{RANGE} = 39 - 5$$

3. Consider the following data: 7 u 12 8 13
If the mode is 7, would the value of u be 7 or 13?

7

4. Consider the following data: 17 g 13 19 19
If the range is 17, would the value of g be 2 or 20?

2

5. Consider the following data: 1 j 2 3 2 13 13
If the median is 3, would the value of j be 13 or 1?

1, 13, 2, 3, 2, 13, 13

1, 2, 2, 3, 13, 13, 13

↑
MED

13

1, 1, 2, 3, 2, 13, 13

1, 1, 2, 2, 3, 13, 13

↑
MED

6. Consider the following data: 7 9 5 u 5 5 7 5 3
If the mean is 6, what is the value of u?

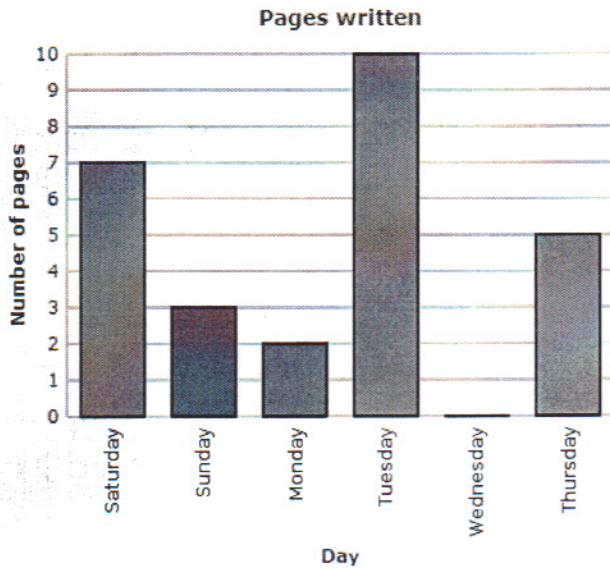
$$\frac{7+9+5+u+5+5+7+5+3}{9} = 6$$

$$\frac{46+u}{9} = 6$$

$$46+u = 54$$

$$u = 8$$

7. An author kept a log of how many pages he wrote in the past 6 days.



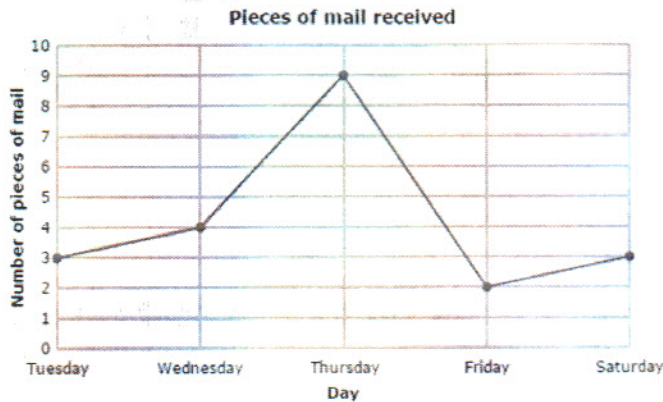
What is the range of the numbers?

7, 3, 2, 10, 0, 5
 $10 - 0 = 10$

What is the mean of the numbers?

$$\frac{7+3+2+10+0+5}{6} = 4.5$$

8. The week of his birthday, Anthony paid attention to how many pieces of mail he received each day.



What is the median of the numbers? What is the mean of the numbers?

3, 4, 9, 2, 3
 2, 3, 3, 4, 9
 ↑
 MEDIAN = 3

$$\frac{2+3+3+4+9}{5} = 4.2$$