4.1 Describing Data

NOTES

ALGEBRA

Write your questions here!

Data:

Mean:

Median:

Mode:

Range:

I'm "mean!"

Consider the following set of data which describes the lengths of 6 naps that Mr. Brust took over a two-week period, in minutes:

38	40	44	45	45	58

Mean: Mode: Median: Range:

The following data describes the lengths of 6 naps that Mr. Bean took over that same period:

18	25	30	42	55	100

Mean: Mode: Median: Range:

Using technology to help!! (Not required, but awesome!)

TI83/TI84

To clear your Calc's memory:
2nd + 7 1 2

To enter your data into the calculator:
stat enter

To find the mean:
2nd stat ▸ ▸ 3 2nd 1 enter enter enter

To find the Standard Deviation

2nd stat ▸ ▸ 7 2nd 1 enter enter enter

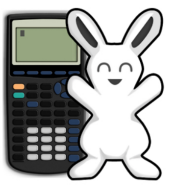
SMP #5

APPS FOR YOUR SMARTPHONE:

IOS (IPHONE)

GraphNCalc83

By Ernest Brock



Android

Wabbitemu

BuckeyeDude Education

SMP #3

Justify!! Who takes longer naps, Brust or Bean? Whose naps are more consistent? Justify each answer with a complete sentence.

Standard Deviation

One way to measure how spread out, or the variation, of a data set is to use the standard deviation.

Finding the Standard Deviation:

$$s = \sqrt{\frac{(x_1-\bar{x})^2+(x_2-\bar{x})^2+\cdots+(x_n-\bar{x})^2}{n-1}}$$

Step:	Reason why:
1. Find the mean of the data set.	We need to find the "middle" of the data set
2. Subtract the mean from each value	We need to find how far away from the middle each value is.
3. Square the differences found in Step 2	We need these values to be positive.
4. Add those squares (found in Step 3)	We need to find the "average difference"
5. Divide the sum by (n-1)	
6. Take the square root	We need to "undo" the squaring in step 3.

Find the standard deviation of the length of Brust's naps in minutes:						
Length of nap	38	40	44	45	45	58
Dev. From mean						
Sq. dev from mean						

Sum of squares: Divide by n -1: Square Root:

Standard Deviation:

Find the standard deviation of the length of Bean's naps in minutes:						
Length of nap						
Dev. From mean						
Sq. dev from mean						

Sum of squares: Divide by n -1: Square Root:

Standard Deviation:

What does the standard deviation tell us about the difference between Mr. Brust's and Mr. Bean's naps?

Find the value of x.

a. 13, 9, ***x,*** 9, 4, 17 The mean is 12.

b. 90, 25, ***x***, 20 ; The median is 27.

SUMMARY:

Now, summarize your notes here!