

MATH 3307

Lesson 2

One question we want to answer about data is about its location, particularly the location of its center.

- Mean –

Symbols for mean: \bar{x} vs. μ

- Median –

- Mode –

Examples:

1. Twelve babies spoke for the first time at the following ages (in months):

8 9 10 11 12 13 15 15 18 20 20 26

a. What is the mean of the data?

b. What is the median of the data?

To Copy: 8,9,10,11,12,13,15,15,18,20,20,26

R Studio Commands:

To assign to a list: `assign("name",c(1,2,3,4,5))`

`mean(name)`

`median(name)`

`min(name)`

`max(name)`

`sort(name)`

`length(name)`

TI-83/84 Calculator Commands

To assign values to a list: STAT → (option 1): Edit

Fill in the values to the L1

(to clear a list, scroll up to highlight list name, press CLEAR, scroll down)

To find measures:

STAT → (right arrow) Calc →

(option 1): 1-Var Stats

List: list name (usually L1)

FreqList: >>Blank<<

\bar{x} : Mean
Sx: Standard Deviation
n: size of list
minX: Minimum Value
Q1: First Quartile
Med: Median Value
Q3: Third Quartile
maxX: Maximum Value

To copy:

174,142,131,145,175,150,176,151,110,162,133,1
63,135,178,178,154,166,146,156,167

3. The test scores of a class of 20 students have a mean of 71.6 and the test scores of another class of 14 students have a mean of 78.4. Find the mean of the combined group.

4. Explain why the conclusion drawn is not valid:

A businesswoman calculates that the median cost of the five business trips that she took in a month is \$600 and concludes that the total cost must have been \$3000.