



# Tutorial Request Form (TRF) Pre-Work Inquiry (Before the Tutorial)

(B)

Subject: Math 7

Standard/Essential Qucs.: What is the diff. between mean, median and mode?

Name: Maria Velasco

AVID Period: 30

Date: 2/12/11

Pre-work Inquiry

Resources

Collaborative Inquiry

Cornell Note-Taking

Reflection

Total

/12

/1

/2

/3

/7

/25

Initial Question:

Source, page # & problem #: txt. bk. p. 145 #2

What are the mean, median, and mode of my math tests?

98, 75, 83, 59, 75, 90, 65, 85

/1

Key academic vocabulary/definition associated with topic/question:

1. mean - average. sum of a set of numbers divided by how many numbers are in the set

2. median - the middle number of a collection of numbers arranged in order

3. mode - the number occurring most frequently in a set of numbers

What I Know about My Question:

1. My mode is 75 because I received two scores of 75 vs. just one

2. My mean is  $78.75 = 79\%$  because I added all my tests scores (630) and divided by 8. This equaled 78.75 which I rounded up to 79%.

/2

Critical Thinking about Initial Question:

Test scores for median:

98, 75, 83, 59, 75, 90, 65, 85

59, 65, 75, 75, 83, 85, 90, 98

same middle #'s

↓  
?

/3

Identify General Process and Steps:

1. List test scores

2. Put test scores in order

3. For even amount, find the average of the two middle numbers

/2

Question from Point of Confusion:

How do I find the median of a even collection of numbers when one of the middle numbers is repeated?

/2

### Collaborative Inquiry (During the Tutorial)

Notes from Inquiry: (Completed by tutor)

Continue to Identify Process and Steps:

### Reflection (In class--After the Tutorial)

My point of confusion was ... \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ /1

What I learned about my point of confusion is... \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ /1

I gained a new/ greater understanding of my point of confusion by/when... \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ /2

This learning is important because it connects to my previous learning/experience, myself, and/or my world (circle one), in the following way... \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ /2

What I found meaningful about today tutorial session is... \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ /1

Topic: Section 12.4  
Box and Whisker  
Plots & Working  
with Data

Name: Maria Velasco

Class: Math

Period: 3

Date: 2/12/11

(B)

QUESTIONS/MAIN IDEAS:

NOTES:

① What is the mean?

Mean: The sum of a set of numbers divided by number of numbers in a set (the average)

② What is the median?

Median:

- odd collection of numbers - arranged in order, it is the middle number
- even collection of numbers - arranged in order, it is the average of the two middle numbers

③ What is the mode?

Mode: the number that occurs most frequently in a collection of numbers

④ What is a quartile?

Quartile: the values in a collection of numbers that separate data into 4 equal parts

⑤ What are quarters?

Quarters: When data is divided into equal fourths, a quarter contains  $\frac{1}{4}$  of all data points

They are not necessarily all the same length

⑥ How do I find quartiles?

- Arrange data points from least to greatest
- Partition data into 4 equal parts (or quarters)
- Create a box-and-whisker plot to see a graphic summary of the information

SUMMARY: (Gist)

- 1) data
- 2) quartile
- 3) order
- 4) partition
- 5) box & whisker

When working with data, you can order the data from smallest to largest, find the quartiles by partitioning the data into 4 quarters and create a graphic representation of the data by drawing a box and whisker plot.

Topic: \_\_\_\_\_

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Period: \_\_\_\_\_

Date: \_\_\_\_\_

pg 2 Cont.

QUESTIONS/MAIN IDEAS:

NOTES:

①

Example 1:

Find quartiles and create a box-and-whisker plot.

Step 1: Order

6, 6.5, 7, 7, 7, 7.5, 8, 8.5, 9, 9, 9.5, 10, 10, 10, 10.5, 11, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14, 14

\* 27 students created a record of the number of hours they spent on homework in a week.

Step 2: Partition

1st quarter: 6, 6.5, 7, 7, 7

2nd quarter: 7.5, 8, 8.5, 9, 9, 9.5, 10

3rd quarter: 10, 10, 10.5, 11, 11, 11.5, 11.5

4th quarter: 11.5, 12, 12.5, 13, 13.5, 14, 14, 14

Here are the results:

9.5, 14, 7, 7.5,  
12, 8.5, 11.5, 10,  
7, 16, 10, 11, 9, 11.5,  
8, 14, 10.5, 12.5,  
7, 13, 13.5, 10,  
10.5, 7, 11, 9, 10

Lower quarter      and quarter      4th quarter  
3rd quarter

← 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17

6 = lower extreme

10 = median

17 = upper extreme

SUMMARY: