

Math 110  
Spring, 2009

Name \_\_\_\_\_  
Calculator \_\_\_\_\_

Homework #5  
Due Monday, March 23  
No late papers accepted! No excuses!

1. The GPA for 40 students is represented in the following frequency distribution. **2 points each**

<u>GPA</u>	<u>Frequency</u>
<u>0.5 – 0.9</u>	<u>4</u>
<u>1.0 – 1.4</u>	<u>2</u>
<u>1.5 – 1.9</u>	<u>7</u>
<u>2.0 – 2.4</u>	<u>9</u>
<u>2.5 – 2.9</u>	<u>2</u>
<u>3.0 – 3.4</u>	<u>10</u>
<u>3.5 – 3.9</u>	<u>2</u>
<u>4.0 – 4.4</u>	<u>4</u>

- Construct a relative frequency distribution.
- Construct a cumulative frequency distribution.
- Find the mean and standard deviation.
- What is the class width?
- What is the upper class limit of the 5<sup>th</sup> class?
- Is this data qualitative or quantitative?

2. The cost of five homes in a certain area is given.
- \$167,000      \$175,000      \$195,000      \$165,000      \$1,245,000

Which measure of central tendency should be used and why? Do not find the measure of central tendency!**4 points**

3. Health care issues are receiving much attention in both academic and political arenas. A sociologist conducted a survey of citizens over 60 years of age whose net worth is too high to qualify for government health care but have no private health insurance. The ages of the 25 uninsured senior citizens were as follows.

68 73 66 76 86 74 61 89 65 90 69 92 76

62 81 63 68 81 70 73 60 87 75 64 82

Mean \_\_\_\_\_ Median \_\_\_\_\_ Mode \_\_\_\_\_ MidRange \_\_\_\_\_

Range \_\_\_\_\_ St Dev \_\_\_\_\_ Variance \_\_\_\_\_ Q1 \_\_\_\_\_

Q3 \_\_\_\_\_ -IQR \_\_\_\_\_

Is the data continuous or discrete?

4. The following data represent a random sample of 15 complaints registered with the customer service department of a store.

Other	Defective product	Excessive waiting time
Messy Store	Other	Other
Messy Store	Rude personnel	Messy Store
Other	Messy Store	Messy Store
Defective Product	Other	Messy Store

- Is this data qualitative or quantitative?
  - What measure of central tendency would you use to describe this data?
  - Find the measure of central tendency from part (b).
5. If distributions are skewed to the right, what is the relationship of the mean, median, and mode?
- mean > median > mode
  - median > mean > mode
  - mode > mean > median
  - mode > median > mean

