

Statistics

Quiz 1 – Descriptive Statistics

- 1.) Which of the following measures of central tendency takes into account **all** of the data in a set of numbers? **MEAN / MEDIAN / MODE**
- 2.) Which measure of central tendency requires that the numbers in a data set be arranged in order before you find or calculate it? **MEAN / MEDIAN / MODE**
- 3.) Which measure of central tendency tends to tune-out data value(s) that are extremely larger or extremely smaller than the majority of the numbers in a data set? **MEAN / MEDIAN / MODE**
- 4.) Shown below is the mileage recorded by the school van for 8 different trips.

12.5 mpg	16.75 mpg	11.0 mpg	12.5 mpg
12.25 mpg	11.75 mpg	12.5 mpg	13.0 mpg

For this group of data compute the

- a.) *mean* _____
 - b.) *median* _____
 - c.) *mode* _____
 - d.) *range* _____
 - e.) *standard deviation* _____
- 5.) Shown below are 9 quiz scores for a Physics student.

93%	95	90	93	70
92	94	96	68	-----

- a.) Calculate the MEAN quiz score for this student. _____
- b.) Calculate the MEDIAN quiz score for this student. _____
- c.) If the two low scores are a result of being sick and missing class, which measure of central tendency do you think is more “fair” to the student? **MEAN / MEDIAN**
- d.) If you believe that being sick is "just too bad" and there are no excuses for low quiz scores, which measure of central tendency would you use? **MEAN / MEDIAN**

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6.) **TRUE / FALSE** If the **range** of a data set is relatively large, that means that the numbers in the data set are very similar in size.

7.) Compute the *range* and *standard deviation* for this set of numbers.

Hourly salaries at Acme Technology:

\$10.28 \$9.18 \$8.05 \$10.50 \$11.85 \$8.03

range = _____

standard deviation = _____

8.) Which machine does a better job at accurately filling 12 oz-size cereal boxes? Answer the question below in order to find out.

G-Tech

Results of filling 15 boxes selected at random from a 1000 box production run.

12.0oz	11.5	11.0	12.9	11.0
12.1	12.9	10.9	11.2	11.3
12.9	13.2	10.8	11.2	12.0

Dynamic Flow

Results of filling 15 boxes selected at random from a 1000 box production run.

12.2	12.5	11.8	11.5	12.1
11.6	11.7	12.2	12.5	12.2
12.6	12.5	11.9	11.8	11.5

Determine the *mean* number of ounces per box for each machine:

G-Tech: _____ oz

Dynamic Flow: _____ oz

Determine the *range* in terms of ounces for each machine:

G-Tech: _____ oz

Dynamic Flow: _____ oz

Which machine did a better job at consistently filling the boxes to the desired 12 oz amount?