9A Just Graphin' It Name _____Per: _____

SHOW YOUR WORK AND WORK IN PENCIL Due Date: February 15th / February 19th

1. Interpret, represent and analyze the data according to the instructions for the following test scores.

   Class A Test Scores: 51, 45, 45, 45, 33, 51, 48, 36, 48, 51, 51, 48, 42, 45, 52, 29, 39, 51

   a. Order the class of test scores from least to greatest:

      Test Scores:

   b. Find the three measures of central tendency from the data
      - Mean:_____
      - Median:_____
      - Mode:_____

   c. Find the five number summary for the data
      - Minimum _____
      - Median:_____
      - Maximum:_____
      - Q1: _____
      - Q3:_____

   d. Create a HISTOGRAM with intervals

      $20-29.9, 30-39.9, 40-49.9\ etc.$

   e. Create a DOT PLOT

   f. Using your five number summary, create a BOX PLOT

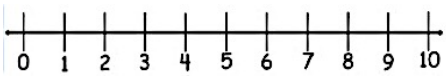
2. List at least one advantage and at least one disadvantage to each type of representation.

	Advantage	Disadvantage
a. Dot Plot		
b. Histogram		
c. Box and Whisker (Box Plot)		

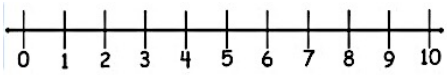
3. Kara had 85, 83, 92, 88, and 69 on her first five math tests. She knows that she needs an average (mean) of 85 to get a B. What score must she get on her last test to get a B?

4. Ms. Packer teaches 4 sections of Secondary Math I. Her overall mean on the last test was 87. If three of the class means were 92, 88, and 80, what was the approximate mean for the fourth class?

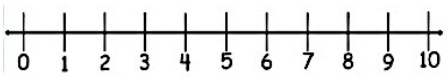
5. The following data was observed by a city planner. The city planner recorded the number of cars that went through an intersection during a given hour **4, 5, 2, 6, 7, 8, 5, 6, 7, 2, 3, 6, 4, 4**.
   a. Find the mean:
   b. Find the mode:
   c. Create a histogram with 4 intervals: $2-3, 4-5,\ 6-7, 8-9$
   d. Create a dot plot



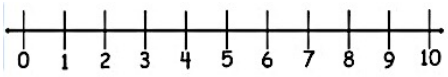
   e. Write the five number summary:
      - Minimum:
      - Q1:
      - Median:
      - Q3:
      - Maximum:
   f. Create a box and whisker plot



6. A gym teacher at a middle school collected this data about the number of pull-ups by seventh graders in gym class **2, 3, 4, 3, 2, 5, 5, 6, 6, 6, 9, 4, 10, 3, 2, 1, 9**
   a. Find the mean:
   b. Find the mode:
   c. Create a histogram (intervals 0–2, 3-5, 6-8 etc).
   d. Create a Dot Plot



   e. Find the five number summary
      - Minimum:
      - Q1:
      - Median:
      - Q3:
      - Maximum:
   f. Create a Box and Whisker (Box Plot)



7. Jake believes that outliers have a greater impact on the mean. Andrew believes outliers have a greater impact on the median. The data for the number of students in classes at Vista is: {42, 32, 44, 46, 38, 39, 41, 14, 35}.
   a. Find the **mean** number of students? _____
   b. Find the **median** number of students?_____
   c. Identify the **outlier**? _____
   d. Find the **mean** without the outlier? _____
   e. Find the **median** without the outlier? _____
   f. Do outliers have a greater impact on mean or median? _____ Explain:
   g. **E.C.** Mathematically prove if it is an outlier or not (IQR*1.5). See your study guide for details ☺.