

**12.1H Just Graphin' It**

SHOW YOUR WORK AND WORK IN PENCIL

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

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, 51, 21, 39, 51

**Class B Test Scores:** 48, 51, 48, 24, 48, 51, 48, 48, 51, 48, 45, 31, 30, 36, 39, 30, 45, 33, 45, 27, 39

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

Class A:

Class B:

b. Find the three measures of central tendency from the data of class A and class B.

	CLASS A	CLASS B
Mean		
Mode		
Median		

c. Create a **HISTOGRAM** for **Class A**.

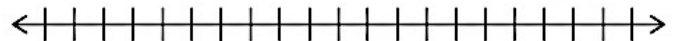


d. Create a **DOT PLOT** for **Class B**

e. Write the five number summary for **Class A**

- Minimum \_\_\_\_\_
- Q1: \_\_\_\_\_
- Median: \_\_\_\_\_
- Q3: \_\_\_\_\_
- Maximum: \_\_\_\_\_

f. Using your five number summary, create a **BOX PLOT** for **Class B**.



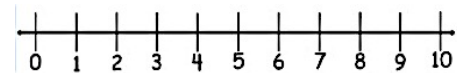
g. Which class did better overall? \_\_\_\_\_ Explain:

2. The following data were collected by a city planner recording the number of cars that went through an intersection during one hour each time the light changed: **4, 5, 2, 6, 7, 8, 5, 6, 7, 2, 3, 6, 4, 4.**

a. Find the mean: \_\_\_\_\_ Find the mode: \_\_\_\_\_

c. Create a dot plot

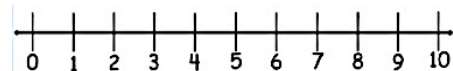
b. Create a histogram with 4 intervals.



c. Write the five number summary for #2.

- Minimum:
- Q1:
- Median:
- Q3:
- Maximum:

d. Create a box plot.



3. List one advantage and one disadvantage to each type of representation.

	Advantage	Disadvantage
a. Dot Plot		
b. Histogram		
c. Box Plot		

4. Jake believes outliers have a greater impact on the mean. Andy believes outliers have a greater impact on the median. The numbers of students in 9<sup>th</sup> grade math classes at VHMS are: {42, 32, 44, 46, 38, 39, 41, 14, 35}.

- a. Find the **mean** number of students? \_\_\_\_\_      b. Find the **median** number of students? \_\_\_\_\_  
 c. Mathematically find 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:

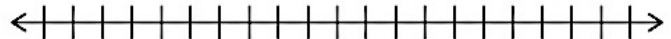
5. The number of home runs a baseball player hits every season: **0, 12, 4, 5, 14, 27, 2, 11, 3**

- a. Find the IQR. \_\_\_\_\_  
 b. Are there any outliers? \_\_\_\_\_ Explain: \_\_\_\_\_

c. Write the five-number summary.

- Minimum:
- Q1:
- Median:
- Q3:
- Maximum:

d. Create a box plot.



6. The save percentage for a goalie in the NHL by month: **91.2, 92.4, 92.2, 91.7, 78.3, 89.9, 88.9, 91.0**

- a. Find the IQR. \_\_\_\_\_  
 b. Are there any outliers? \_\_\_\_\_ Explain: \_\_\_\_\_

c. Write the five-number summary.

- Minimum:
- Q1:
- Median:
- Q3:
- Maximum:

d. Create a box plot.



7. 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?