Name: _____ **Date:** _____

Answer the following questions to practice using what you've learned. Print this test. Then, write your responses in the space provided. Scan or take a picture of your completed test, upload it to your computer (as a .pdf or .jpg file) and submit the assignment to the appropriate dropbox.
No credit will be given to answers without sufficient supporting evidence/work.

1. Consider the data set: {100, 98, 64, 79, 73, 89, 56, 70, 102, 63, 93, 100, 64} (11 points *total*)

a. Order the data from least to greatest. (1 point)

b. Identify the 5 number summary values below. Show work when averaging two data values. (5 points)

Minimum: _____

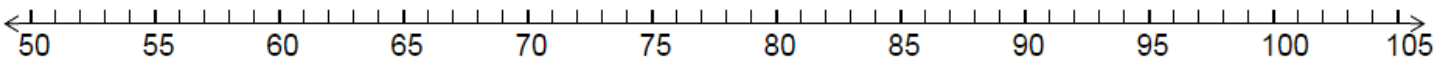
Q_1 Value: _____

Q_2 Value: _____

Q_3 Value: _____

Maximum: _____

c. Graph the Box-and-Whisker Plot for this data, using the number line provided below. Do not overlap your Box-and-Whisker Plot with the number line. Use a ruler or straight edge to ensure correct values and straight lines. (5 points)



No credit will be given to answers without sufficient supporting evidence/work.

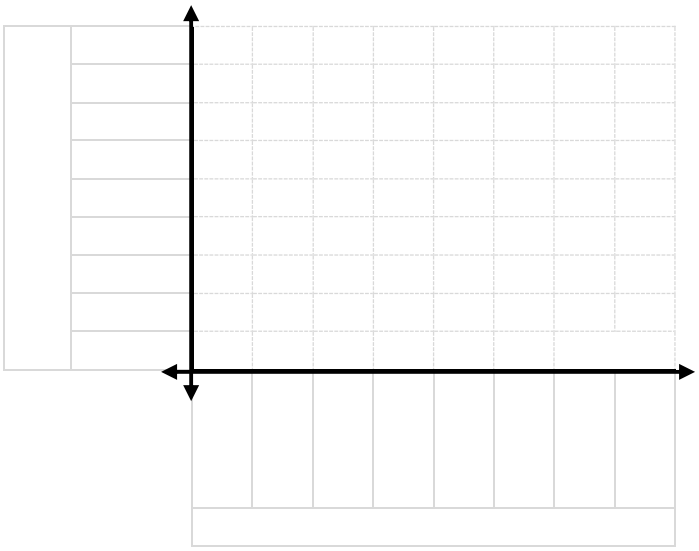
2. Consider the data set of lengths of boats (in feet) in a harbor: (12 points *total*)

34	5	19	23	15	48	45	54	21	83
60	83	27	27	14	39	12	29	24	20
62	6	38	29	82	37	9	8	14	60

a. Complete the frequency table for the data set. Use 5 – 14 as the first class interval. (3 points)

Class	Frequency

b. Use the frequency table to draw a histogram. Do not forget to label both axes with a label and units. Use the partially created histogram and a ruler or straight edge to ensure even spacing and straight lines. (5 points)



c. Calculate the mean and the median for the data. Show all your work. Round values to the tenths place. Compare the two values using an inequality symbol. (3 points)

d. Describe the ***type*** of distribution according to the histogram, in a complete sentence (with proper spelling, grammar and punctuation). (1 point)

No credit will be given to answers without sufficient supporting evidence/work.

3. Consider the data set of race times for runners: (11 points *total*)

Runner Age (years)	15	13	15	16	17	16	18	19	18	17	15	12
Time (minutes)	3	2	3	4.5	4.5	4	5.1	5	5.2	4.3	3.1	2

a. Organize the data in the table. (1 point)

Runner Age (years)												
Time (minutes)												

b. Calculate the summary points for each group of data points. Show all your work. Do not round any decimal answers. Write the points in proper point notation. (3 points)

Group 1: _____

Group 2: _____

Group 3: _____

c. Calculate the slope for the median-median line. Show all your work. Upon finding the slope, convert it into a reduced fraction (slope should always be represented as a fraction. There should not be any decimals in the numerator or denominator). (1 point)

d. Find the equation for *line a*. Show all your work. Simplify the equation to slope-intercept form. Convert any decimals to simplified fractions (not mixed numbers). (1 point)

e. Find the equation for *line b*. Show all your work. Simplify the equation to slope-intercept form. Convert any decimals to simplified fractions (not mixed numbers). (1 point)

No credit will be given to answers without sufficient supporting evidence/work.

Problem 3 (continued).

f. Use the *y*-intercepts from steps d and e to find the equation of the median-median line, in slope-intercept form. Show all your work. Convert any decimals to simplified fractions (not mixed numbers). (2 points)

g. Use the median-median line to predict the race time for a runner that is 21 years old. Show all your work. State your answer in a complete sentence (with proper spelling, grammar and punctuation). (2 points)