Statistics Day #4   Name_____

Comparative Box Plots

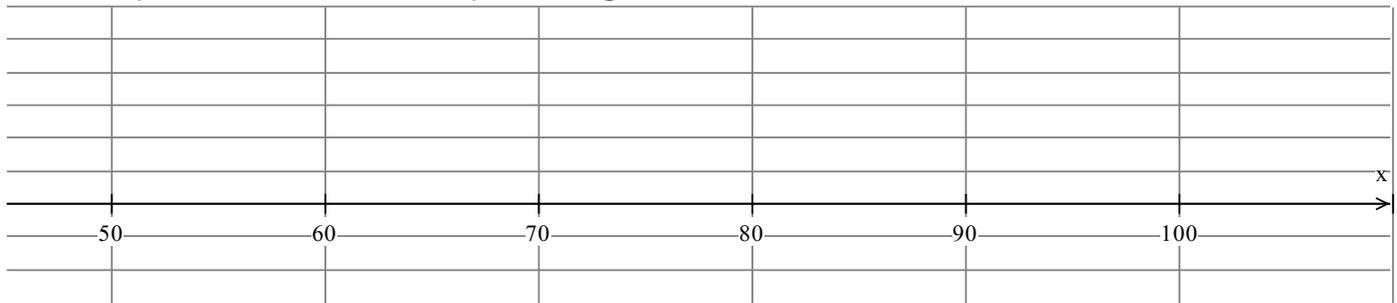1. The data below are the test scores for two tests in 8th period math.

Test 1: 50, 58, 59, 60, 62, 65, 66, 68, 70, 71, 75, 81, 84, 85, 88, 93	Test 2: 65, 67 73, 74, 75, 77, 78, 80, 81, 83, 84, 85, 87, 88, 90, 92

(a) Find the 5 number summaries for each test.

       Test 1:   Test 2:

(b) Draw comparative box-and-whisker plots **using the same number line**. See your classwork for an example.

$$\text{—50—}\qquad\text{—60—}\qquad\text{—70—}\qquad\text{—80—}\qquad\text{—90—}\qquad\text{—100—}\qquad x$$

(c) Compare the range and the interquartile range for the two tests.

(d) Write a sentence comparing the median and the mean values for the two tests.

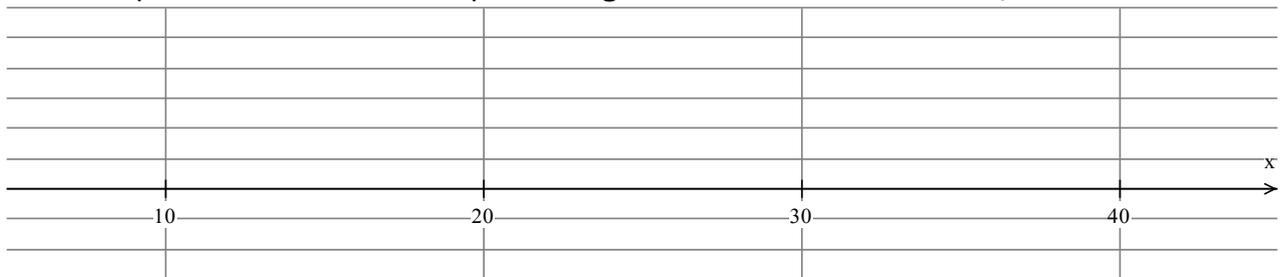(e) On test 1 you scored a 71, what percent of the class did you score higher than?

(f) On test 2 you scored a 74, what percent of the class did you score higher than?

(g) Which test did you do better on compared to the rest of the class? Explain.

2. The table below lists the 5-number summaries for the number of chocolate chips per cookie in a Bakery Cookie and a Grocery Store Cookie.

Bakery Cookie	Grocery Store Cookie
Min: 20 Q1: 23 Med: 26 Q3: 30 Max: 35	Min: 15 Q1: 20 Med: 23 Q3: 28 Max: 33

(a) Draw comparative box-and-whisker plots **using the same number line**. See your classwork for an example.

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                                                              x
      10            20            30            40
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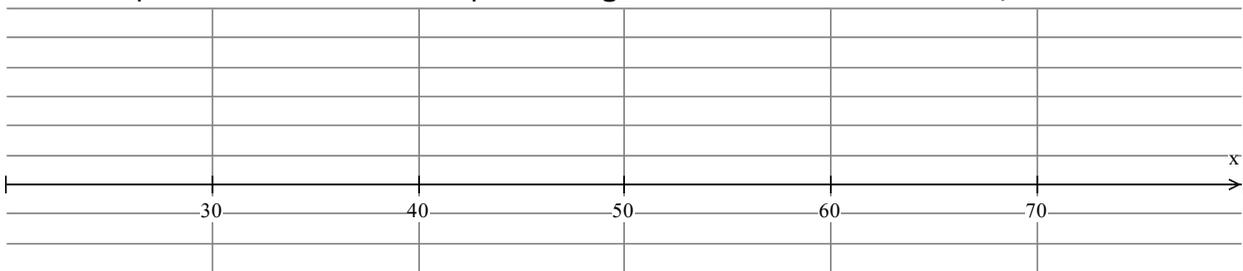
(b) What percent of the Bakery Cookies have more than 20 chocolate chips per cookie? _____

(c) What percent of the Grocery Store Cookies have more than 20 chocolate chips per cookie? _____

(d) Write four sentences that compare the number of chocolate chips in the two types of cookies. Use shape, center, spread, and one other interesting comparison. (See your classwork for an example)

(e) Where would you buy your cookies if you are a chocolate chip lover? Explain.

3. The table below lists the 5-number summaries for the average monthly temperatures in Boston, MA and
Seattle, WA in degrees Fahrenheit

Boston	Seattle
Min: 29 Q1: 37 Med: 52 Q3: 67 Max: 74	Min: 41 Q1: 45 Med: 52 Q3: 61 Max: 66

(a) Draw comparative box-and-whisker plots **using the same number line**. See your classwork for an example.

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                                                              x
      30            40            50            60            70
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(b) What percent of the average monthly temperatures in Boston are colder than $67°F$? _____

(c) What percent of the average monthly temperatures in Seattle are colder than $67°F$? _____

(d) Write four sentences that compare the average monthly temperatures of the two cities. Use shape, center, spread, and one other interesting comparison. (See your classwork for an example)