Statistics Honors Boxplots Practice (Day 4) Name _____

Using Boxplots to Analyze Data

Your group will be assigned to create a boxplot using specific data from the table below.

Data from Mrs. Dynarski's Statistics Honor's Classes:

Gender	Height (in inches)	Study Time (minutes)
Male	71	0
Female	65	0
Female	65	15
Male	67	5
Female	62	10
Male	72	60
Male	69	10
Female	58	15
Male	70	30
Male	69	20
Female	58	25
Female	66	30
Male	73	30
Male	72	15
Female	65	20
Male	69	10
Female	64	15
Female	60	20
Male	68	10
Male	68	5
Female	62	10
Male	70	10
Male	71	10
Male	65	5
Male	71	10
Female	67	30
Male	70	10
Female	65	45
Male	72	0
Male	71	10
Female	66	20
Female	63	45

Statistics Honors Boxplots Practice (Day 4) Name _____

Using Boxplots to Analyze Data – GROUP 1

1. Create a modified boxplot using the **entire class' data on height**. Be sure to write down the 5-number summary and to show all work for outliers.

2. Describe your modified boxplot.

3. What do you notice about the median? Why do you think this is?

4. What do you notice about the shape? Why do you think this happened?

5. This just in! NBA basketball player Yao Ming has relocated to East Brunswick from Shanghai. He has decided to enroll back into high school to receive his diploma. He is placed in our Statistics Honors class. He is 7 feet and 5 inches tall. What do you think would happen to your boxplot if you added his height to your data set?

6. How does Yao Ming's height affect the median of your boxplot? Why?

7. Would the mean be an appropriate measure of center for this data? Explain your reasoning.

8. Create a modified *side-by-side* boxplot (*one for male and one for females*) using **our class' male and female heights.** Be sure to write down the 5-number summary and to show all work for outliers.

9. Describe your modified side-by-side boxplot for ***both*** the males and females.

10. Compare the median heights of the males and females. Why do you think there is such a significant difference between the two?

11. Compare the shapes of the male and female boxplots. What differences do you notice? Give at least three reasons as to why these differences might emerge.

12. This just in! NBA basketball player Yao Ming has relocated to East Brunswick from Shanghai. He has decided to enroll back into high school to receive his diploma. He is placed in our Statistics Honors class. He is 7 feet and 5 inches tall. What do you think would happen to the male's boxplot if you added his height to the data set?

13. How does Yao Ming's height affect the median of the male's boxplot? Why?

14. Would the mean be an appropriate measure of center for this data? Explain your reasoning.

Statistics Honors Boxplots Practice (Day 4) Name _____

Using Boxplots to Analyze Data - GROUP 2

1. Create a modified boxplot using the **entire class' data on studying time**. Be sure to write down the 5-number summary and to show all work for outliers.

2. Describe your modified boxplot.

3. What do you notice about the median? Why do you think this is so?

4. Are there any outliers? If so, do they affect the shape of your boxplot? Why or why not?

5. One of the other Statistics Honors teachers, Ms. Paul, is currently at the Graduate School of Education at Rutgers University. Based on the rigor of her classes, she spends an hour and a half reading and working on papers. What do you think would happen to your boxplot if you added her studying time to the data set?

6. How does Ms. Paul's studying time affect the median of your boxplot? Why?

7. Create a modified *side by side* boxplot (*one for each*) using **our class' male and female studying times**. Be sure to write down the 5-number summary and to show all work for outliers.

8. Describe your modified side-by-side boxplot for ***both*** the males and females

9. Compare the median studying times of the males and females. Why do you think there is such a significant difference between the two?

10. Compare the shapes of the male and female boxplots. What differences or similarities do you notice? Give at least three reasons as to why these differences/similarities might emerge.

11. One of the other Statistics Honors teachers, Ms. Paul, is currently at the Graduate School of Education at Rutgers University. Based on the rigor of her classes, she spends an hour and a half reading and working on papers. What do you think would happen to your female boxplot if you added her studying time to the data set?

12. How does Ms. Paul's studying time affect the median of the female's boxplot?