

Name: _____
PreCalculus

Date: 5/20/15
Ms. Wilson

Unit #7 Performance Task – Statistical Analysis

The set of data below was gathered from a class of 30 precalculus students.

Heights of Students in Inches					
66	64	62	64	63	63
70	69	73	61	71	66
72	71	72	75	67	71
68	59	66	64	61	69
69	63	64	65	68	70

Complete each of the following on looseleaf. Answer all questions in complete sentences.

- 1.) Create a frequency table for the data using an interval of 2. What information does this provide? (5 points)
- 2.) Compute the mean, median, and mode for the data set. Discuss whether each is a good measure of the average height of a student in the class. Is each a good predictor for average height of students in other precalculus classes? (10 points)
- 3.) What can you say about the data if the mean and median values are close? (5 points)
- 4.) Find the five-number summary for the class heights. (5 points)
- 5.) Create a boxplot and explain what information it gives about the data set. (5 points)
- 6.) A new student is now added to the class. He is a 7'2" star basketball player. Add his height to the data set. Recalculate the mean, median, and five-number summary. Create a new box plot and use your calculator to plot it underneath the boxplot for the original class. How does this new student affect the statistics? (10 points)
- 7.) Explain why this new student would be considered an outlier and the importance of identifying outliers when calculating statistics and making predictions from them. (10 points)
- 8.) Suppose that three additional basketball players transferred into the class. They are 7'0", 6'11", and 6'10". Recalculate the statistics from (9) and discuss the implications of using these statistics to make predictions for other precalculus classes. (10 points)