

Algebra 1 – Review Unit 4

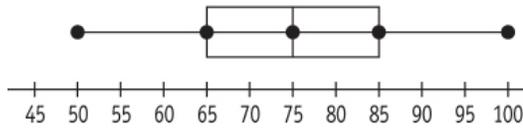
Name: _____ Date: _____ Period: _____

Unit 4 Review – One Variable Statistics

Fill in the following blanks with *ALWAYS*, *SOMETIMES*, or *NEVER*.

1. Removing an outlier from a data set will _____ decrease the standard deviation.
2. The median of a data set is _____ a value in the data set.
3. In a distribution that is skewed right, the mean is _____ greater than the median.

Circle the data sets that match the boxplot. More than one answer may be correct.



4. {50, 50, 65, 65, 66, 73, 77, 80, 80, 90, 90, 100} 5. {50, 65, 75, 75, 85, 100}

The double-stemplot below represents the number of MCs graded during a typical class.

6. Describe the shape of each distribution.
7. Who graded the most mastery checks on a single day?
8. Find the 5# summary for each teacher.
9. Use the 5# summaries to create two parallel boxplots, one for each teacher.

Brust		Bean
9 8 2 2 2 1	3	4 where 4 4 means 44 MCs graded
9 7 4 3	4	4 7 7
8 5 2	5	3 3 5 6 6 6
3 1	6	2 3 4 4 5 5 5 9

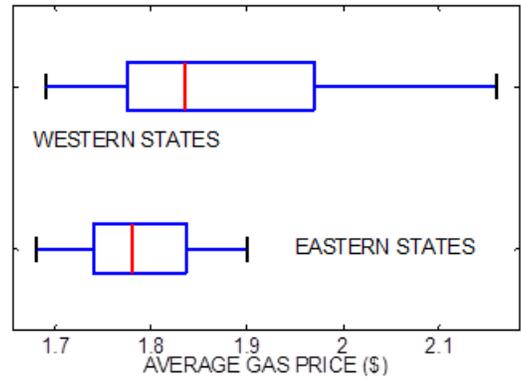
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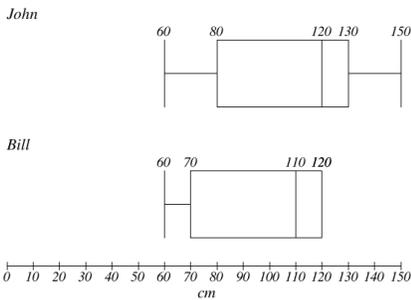
10. Use the boxplot to the right. Circle all of the ***incorrect statements***. There may be several!

- a. The middle 50% of Gas prices were between about \$1.74 and \$ 1.83 for the Eastern States.
- b. The distribution of Western States is skewed to the left.
- c. The interquartile range for Eastern States is greater than the interquartile range for the Western States.
- d. 25% of the scores from the Western States were between \$1.70 and \$1.78.



11. Determine whether the mean for the Eastern States is greater than or less than the median. Use a complete sentence to explain your reasoning.

12. John and Bill are high jumpers. The plots below represent the height of their last 20 jumps.



Using SOCS, compare the distributions of the time it took to blink. Be sure to address all 4 parts of SOCS, if possible. (8 pts)



13. The double stemplot shows the number of points scored by each player of Chicago and Seattle's basketball teams.

Seattle Leaf	Stem	Chicago Leaf
7 4 4	0	7 9
9 8	1	0 0 2 7
3	2	2

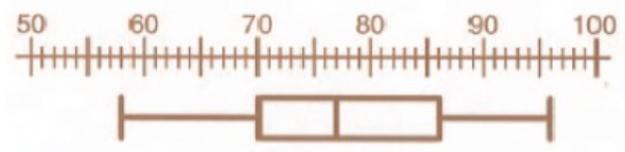
- a. Find the median of each team.
- b. Find the standard deviation of points scored by each player on each team.
- c. If these points represent all of the points scored, who won the game? What was the final score?

Unit 4 – Performance Task Choose TWO tasks to complete.

TASK 1: Create two dot plots with the following data. Dot Plot A: 1, 1, 1, 1, 1, 10, 10, 10, 10, 10.
Dot Plot B: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. Which dot plot has the greater standard deviation?
Write a viable argument for your choice.

TASK 2: The box plot shows a distribution of the amount of money 200 students took on an overnight trip. The minimum amount of money is \$58 and the maximum amount is \$96.

a. How many students took less than \$73 on the trip?

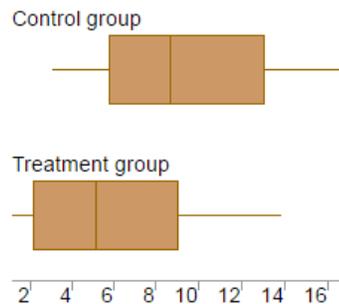


b. How many students took \$70 or more on the trip?

c. How many students took more than \$76 dollars but less than \$87 dollars?

TASK 3: The boxplots below summarize results from a medical study. The treatment group received an experimental drug to relieve cold symptoms, and the control group received a placebo. The boxplots shows the number of days each group continued to report symptoms. Neither boxplot reveals unusual features, such as gaps or outliers.

a) Both plots are skewed to the right, although the skew is more prominent in the treatment group. How do you know this from the plots?



b) Patient response was slightly less variable in the treatment group than in the control group. How many days did each group report symptoms (range of the data for each box)?

c) What is the median recovery time for the treatment group and control group?