

9.6 Choosing a Measure of Center

Chapter 9: Statistics and Data Analysis

Name: _____

Date: _____

Class/Period: _____

Problem 9.81 A neighborhood includes several ordinary homes and two mansions. Choose mean or median to describe a typical sale price, and explain how the mansions affect your choice.

Problem 9.84 A shoe store must decide which size to stock most heavily. Explain why the mode is more useful than the mean.

Problem 9.82 A cafeteria wants to order more of the most popular lunch. Which measure of center answers that question, and why?

Problem 9.85 Commute times have a few very long delays. Choose a measure of center and explain how the delays influence the mean.

Problem 9.83 A balanced set of test scores has no outliers. Explain why the mean is a useful summary and name one other reasonable center.

Problem 9.86 Construct a numerical data set in which mean and median are equal. Explain the balance you created.

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Problem 9.87 Construct a data set in which mean, median, and mode are all different. Calculate each measure.

Problem 9.90 A coach asks for the middle finishing time after the times are ordered. Name the required measure.

Problem 9.88 The largest value becomes 100 times larger. Which center must change, which may stay the same, and why?

Problem 9.91 A store asks for the most frequently purchased size. Name the measure and identify the data feature it uses.

Problem 9.89 A teacher asks for the score each student would have after equal sharing. Name the required measure and explain the wording clue.

Problem 9.92 A report gives a correct mean but calls it a typical value for a strongly skewed distribution. Explain why correct arithmetic does not guarantee a useful summary.

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Problem 9.93 Create two data sets with the same mean but noticeably different medians. Describe which distribution appears more skewed.

Problem 9.95 A company reports mean salary while employees report median salary. Explain how both statistics can be correct and why the company may prefer the larger one.

Problem 9.94 Create two data sets with the same median but very different means. Identify the values that produce the difference.

Problem 9.96 Survey categories are coded 1, 2, and 3. Explain why calculating the mean of those codes may be meaningless even though a calculator produces a number.