

Learning Task: Math Class

Name _____

Date _____

Mathematical Goals

- Represent data with plots on the real number line
- Compare center and spread of two or more different data sets
- Interpret differences in shape, center, and spread in the context of data sets, accounting for outliers

Essential Questions

- How can I use visual representations and measures of center and spread to compare two data sets?

Common Core Georgia Performance Standards

- MCC9-12.S.ID. 1** Represent data with plots on the real number line (dot plots, histograms, and box plots).
- MCC9-12.S.ID. 2** Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, mean absolute deviation) of two or more different data sets.
- MCC9-12.S.ID. 3** Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
6. Attend to precision.

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Mr. Turner has two Math 2 classes. With one class, he lectured and the students took notes. In the other class, the students worked in small groups to solve math problems. After the first test, Mr. Turner recorded the student grades to determine if his different styles of teaching might have impacted student learning.

Class 1: 80, 81, 81, 75, 70, 72, 74, 76, 77, 77, 77, 79, 84, 88, 90, 86, 80, 80, 78, 82

Class 2: 70, 90, 88, 89, 86, 86, 86, 86, 84, 82, 77, 79, 84, 84, 84, 86, 87, 88, 88, 88

1. Analyze his student grades by calculating the mean, median, mean absolute deviation, and interquartile range. Which class do you think was the lecture and which was the small group? Why?
2. Draw histograms to easily compare the shapes of the distributions.
3. Which measure of center and spread is more appropriate to use? Explain.