Name _____ Date _____ Period _____

Lesson 2-5

Reinforce Understanding

Describe Data by Range and Interquartile Range

I can find the range and the interquartile range of a data set and use them to describe how spread out the data is.

Worked model

Seven history test scores are 74, 90, 83, 68, 86, 77, 94. Find the range and the IQR.

1. Order the values: 68, 74, 77, 83, 86, 90, 94.
2. Range: take the least value away from the greatest value. That gives 26 points.
3. The median is 83, so quartile 1 is 74 and quartile 3 is 90.
4. IQR: take quartile 1 away from quartile 3. That gives 16 points.

Answer: The range is 26 points and the interquartile range is 16 points.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Two classes both have a median score of 81. Class A's IQR is 13 and Class B's IQR is 8. Which statement is true?

Circle the letter of the best answer. Show how you know.

A. Class B has a higher median
B. Class A has more students
C. The middle half of Class B's scores is less spread out
D. Class B's highest score is greater

Show your work

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2. Sort each fact under the measure of variation it describes.

Write the name of the correct group on each line.

Groups: Range Interquartile range

- _____Greatest value − least value
- _____Q3 − Q1
- _____The width of the box on a box plot
- _____The distance from whisker tip to whisker tip
- _____Changes a lot when one value is unusually high
- _____Describes the middle 50% of the data

3. A data set runs from a least value of 12 to a greatest value of 30. What is the range?

Circle the letter of the best answer. Show how you know.

A. 12
B. 18
C. 21
D. 30