

Lesson 2-5 • Group 1

Reinforce Understanding

2.5 Small Group • Group 1

With my small group, I can find the range and the interquartile range of a data set and use them to describe how spread out the data is — one step at a time, with support.

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

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 value far above the rest is added to a data set. Sort what happens.

Write the name of the correct group on each line.

Groups: The range grows a lot The IQR barely changes

- _____ Because it uses the greatest value
- _____ Because it uses only $Q1$ and $Q3$
- _____ It measures the whole span of the data
- _____ It measures only the middle half