

Lesson 2-5 • Group 2

Reinforce Understanding

2.5 Small Group • Group 2

I can find the range and the interquartile range of a data set and use them to describe how spread out the data is, explain how I can tell, and judge a case I have not seen before.

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. 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

2. A coach wants ONE number for each question. Sort each question under the measure that answers it.

Write the name of the correct group on each line.

Groups: Range Interquartile range

- _____ How far apart are our best and worst games?
- _____ How consistent is a typical night for this team?
- _____ How much did the middle half of our scores vary?
- _____ What is the full span from lowest to highest?
- _____ Which measure survives one record-breaking game?

3. Class A and Class B both have a range of 40 on a test. Class A's IQR is 8; Class B's is 30. What does that tell you?

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

- A. Class A did better than Class B
- B. Nothing — equal ranges mean the classes performed the same
- C. Class B has more students than Class A
- D. Class A's scores cluster tightly with a few far-out scores; Class B's are spread through the whole range

Show your work