

Data Story Detectives

Use center and spread to describe a set of numbers.

GRADE 6 • NY-6.SP.5

NY-6.SP.5 "Summarize quantitative data sets in relation to their context."

NAME _____

DATE _____

DESCRIBE THE DATA

To summarize a data set, find a measure of center, such as the mean or median, and a measure of variability, such as the range or IQR. The mean is the sum of the values divided by the number of values. Use the context to tell what is typical and how much the values vary.

WORKED EXAMPLE

Two temperatures were 41 degrees and 47 degrees. Find the mean temperature.

1. Add the temperatures: $41 + 47 = 88$.
2. There are two temperatures.
3. Divide: $88 / 2 = 44$.
4. The mean temperature is 44 degrees.

Answer: 44 degrees

PRACTICE 6 problems

- 1** Find the mean of 2, 4, 6, and 8.

ANSWER _____

- 2** Find the median of 13, 15, 18, 20, and 24.

ANSWER _____

- 3** Find the range of 19, 23, 25, and 28.

ANSWER _____

- 4** The data set is 1, 2, 2, 3, 8. Which value is an outlier? Tell why in a short phrase.

ANSWER _____

- 5** Set A: 20, 22, 24. Set B: 18, 22, 26. Which set has greater variability? Give both ranges.

ANSWER _____

- 6** A student read 30, 32, 32, 34, and 36 pages on five days. State the median and the range.

ANSWER _____

APPLY IT Show your work

- 1** The dot plot shows how many minutes nine students spent practicing a game level before finishing it. Find the median and range. Then write one sentence that summarizes the times in context.



ANSWER _____

- 2** A basketball player recorded the number of free throws made during five practice sessions. Find the median and range. What do the results say about the player's practice-session scores?

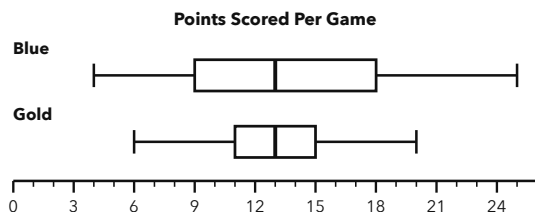
FREE THROWS MADE

Practice session	Free throws made
1	22
2	26
3	30
4	34
5	37

ANSWER _____

CHALLENGE One step up

The box plots show points scored by two teams over several games. Which team was more consistent for its middle half of scores? Explain using the IQR. Which team had the larger overall range?



WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find the mean of 2, 4, 6, and 8.	5
2	Find the median of 13, 15, 18, 20, and 24.	18
3	Find the range of 19, 23, 25, and 28.	9
4	The data set is 1, 2, 2, 3, 8. Which value is an outlier? Tell why in a short phrase.	8; it is much greater than the other values.
5	Set A: 20, 22, 24. Set B: 18, 22, 26. Which set has greater variability? Give both ranges.	Set B; range of Set A = 4 and range of Set B = 8.
6	A student read 30, 32, 32, 34, and 36 pages on five days. State the median and the range.	Median = 32 pages; range = 6 pages.

PART 2 • APPLY IT

- Median = 22 minutes; range = 8 minutes. The median time was 22 minutes, and the times ranged from 18 to 26 minutes.** Order the values shown by the dots and use the middle value for the median. Subtract the least time from the greatest time for the range.
- Median = 30 free throws; range = 15 free throws. The scores varied from 22 to 37 free throws, with 30 as the middle score.** The data are already in order, so the middle value is the median. Subtract 22 from 37 to find the range.

CHALLENGE

Gold was more consistent for its middle half because its IQR is 4 points, while Blue's IQR is 9 points. Blue had the larger overall range, 21 points compared with Gold's 14 points.

Accept equivalent wording that correctly connects the center and spread to the context. For the challenge, students must identify Gold as having the smaller IQR and Blue as having the larger full range.