LESSON MAKER PRO

Data Detectives

Find the center and spread in real data.

GRADE 5 · 5.PS.2

5.PS.2 "The student will solve contextual problems using measures of center and the range. Describe mean as fair share. Describe and determine the mean of a set of data values representing data from a given context as a measure of center..."

NAME _____ DATE _____

CENTER AND SPREAD

Mean is the fair share of a data set. To find the mean, add the values and divide by the number of values. Put data in order to find the median, find the value that appears most for the mode, and subtract the least value from the greatest value for the range.

WORKED EXAMPLE

Three beach teams collected 6, 10, and 14 shells. Find the mean number of shells.

1. Add the values: 6 + 10 + 14 = 30.
2. There are 3 values, so share 30 equally among 3 teams.
3. 30 / 3 = 10.

Answer: Mean = 10 shells

PRACTICE 6 problems

1 Find the mean of 5, 7, 9, and 11.

ANSWER _____

2 Find the median of 15, 9, 13, 11, and 17.

ANSWER _____

3 Find the median of 19, 13, 16, and 18.

ANSWER _____

4 Find the mode of 8, 5, 7, 8, 9, and 8.

ANSWER _____

5 Find the range of 22, 18, 25, 19, and 21.

ANSWER _____

6 Find the mean and the range of 15, 17, 19, 21, and 23.

ANSWER _____

APPLY IT Show your work

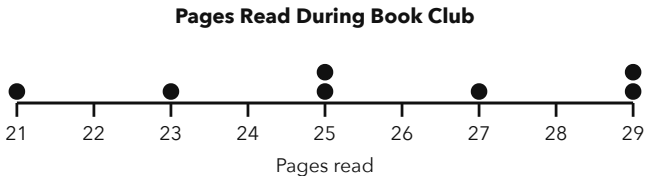
1 Use the table. What is the mean number of minutes Jay spent building a game level each day? What is the mode?

JAY'S GAME-LEVEL BUILDING TIME

Day	Minutes
Monday	20
Tuesday	25
Wednesday	15
Thursday	20
Friday	35

ANSWER _____

2 Use the dot plot. What are the median number of pages read and the range?



ANSWER _____

CHALLENGE One step up

A student ran five laps. The mean lap time was 24 seconds. Four lap times were 21 seconds, 26 seconds, 24 seconds, and 23 seconds. What was the fifth lap time? Then find the median, mode, and range of all five lap times. Show your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY

Data Detectives

GRADE 5 · 5.PS.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the mean of 5, 7, 9, and 11.	**8**
2	Find the median of 15, 9, 13, 11, and 17.	**13**
3	Find the median of 19, 13, 16, and 18.	**17**
4	Find the mode of 8, 5, 7, 8, 9, and 8.	**8**
5	Find the range of 22, 18, 25, 19, and 21.	**7**
6	Find the mean and the range of 15, 17, 19, 21, and 23.	**Mean = 19; range = 8**

PART 2 · APPLY IT

1. **Mean = 23 minutes; mode = 20 minutes** Add the five times to get 115 minutes, then divide by 5. The value 20 appears twice, more than any other value.
2. **Median = 25 pages; range = 8 pages** The middle value in the ordered set of seven values is 25. Subtract 21 from 29 to find the range.

CHALLENGE

Fifth lap time = 26 seconds; median = 24 seconds; mode = 26 seconds; range = 5 seconds

Accept answers with or without units when the numerical value is correct. For the challenge, accept any clear reasoning that finds a total of 120 seconds and the missing time of 26 seconds.