LESSON MAKER PRO

Data Detective

Find the center, spread, and story in data.

GRADE 6 · 6.DSP.A.24

6.DSP.A.24 "Represent numerical data graphically, using dot plots, line plots, histograms, stem and leaf plots, and box plots. a. Analyze the graphical representation of data by describing the center, spread..."

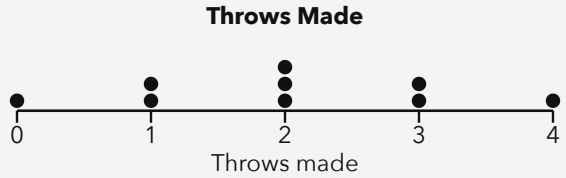
NAME _____ DATE _____

READ THE DATA

The median is the middle value when the data are in order. The range is the greatest value minus the least value. On a dot plot, look for peaks, gaps, and whether the dots balance around the center.

WORKED EXAMPLE

Find the median, range, and shape of the dot plot.



1. Count 9 dots. The 5th dot is at 2.
2. Median = 2.
3. Range = 4 - 0 = 4.
4. The dots balance around 2, so the shape is symmetric.

Answer: Median: 2; range: 4; shape: symmetric.

PRACTICE 4 problems

1 Minutes: 7, 8, 8, 9, 9, 10, 12. Find the median and range.

ANSWER _____

2 Points: 11, 11, 12, 13, 13, 13, 14, 16. Which value would have the tallest dot stack? Find the range.

ANSWER _____

3 Scores: 16, 17, 18, 18, 19, 21, 23, 23, 25. Find the median and range.

ANSWER _____

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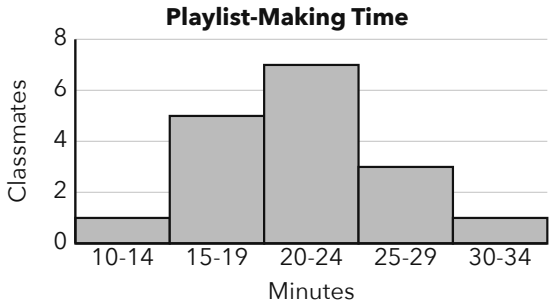
4 Daily steps, in hundreds: 26, 27, 27, 28, 29, 34. Find the median and range.

ANSWER _____

_____

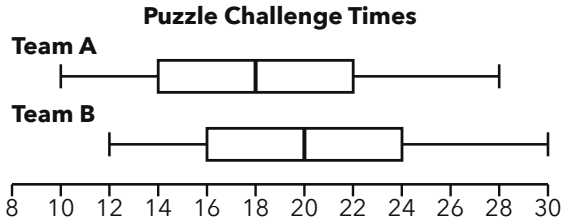
APPLY IT Show your work

1 Classmates tracked how long they spent making a playlist. Which time group is the peak? How many classmates spent at least 25 minutes?



ANSWER _____

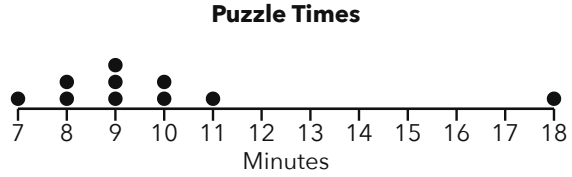
2 Two teams timed a puzzle challenge. Which team had the greater median time, and by how many minutes?



ANSWER _____

CHALLENGE One step up

A club timed how long members took to finish a puzzle. Find the median and range. Why might the range give a misleading picture of most members' times?



WORK SPACE AND ANSWER

ANSWER KEY # Data Detective

GRADE 6 · 6.DSP.A.24

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Minutes: 7, 8, 8, 9, 9, 10, 12. Find the median and range.	**Median: 9; range: 5.**
2	Points: 11, 11, 12, 13, 13, 13, 14, 16. Which value would have the tallest dot stack? Find the range.	**Tallest stack: 13; range: 5.**
3	Scores: 16, 17, 18, 18, 19, 21, 23, 23, 25. Find the median and range.	**Median: 19; range: 9.**
4	Daily steps, in hundreds: 26, 27, 27, 28, 29, 34. Find the median and range.	**Median: 27.5 hundreds of steps; range: 8 hundreds of steps.**

PART 2 · APPLY IT

1. **Peak: 20-24 minutes; at least 25 minutes: 4 classmates.** The 20-24 bin is tallest. Add the counts in the 25-29 and 30-34 bins: 3 + 1 = 4.
2. **Team B, by 2 minutes.** Team A's median is 18 minutes and Team B's is 20 minutes. The difference is 2 minutes.

CHALLENGE

Median: 9 minutes; range: 11 minutes. Most times are 7-11 minutes, but one extreme time at 18 minutes makes the range much larger.

Accept 27.5 for the fourth practice median if the unit is clear from the question. For the challenge, accept explanations that identify the isolated 18-minute time as the reason the range does not describe most times well.