LESSON MAKER PRO

# Data Detective

*Read the plot, then use the numbers.*

**GRADE 6 · 6.DS.B.5**

**6.DS.B.5** "Interpret numerical data in plots on a number line, including line plots, histograms, and box plots."

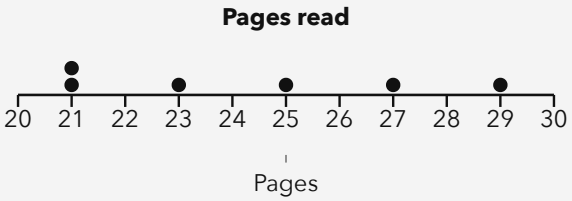
NAME _____ DATE _____

## READ AND CALCULATE

To find the median, put the values in order and find the middle. If there are two middle values, average them. The range is the greatest value minus the least value. The middle 50% spread of a box plot is Q3 minus Q1.

### WORKED EXAMPLE

Use the dot plot. What are the median and range?




1. Read the dots in order: 21, 21, 23, 25, 27, 29.
2. Average the middle pair: (23 + 25) / 2 = 24.
3. Subtract the least from the greatest: 29 - 21 = 8.

**Answer: Median: 24 pages; range: 8 pages**

## PRACTICE 4 problems

**1** Find the median score: 3, 7, 9, 11, 15.

**ANSWER** _____

**2** Find the range: 4, 8, 10, 12, 18.

**ANSWER** _____

**3** The scores are 6, 8, 10, 12. If 14 is added, by how much does the median increase?

**ANSWER** _____

**4** Set A is 2, 4, 6, 10. Set B is 2, 4, 6, 16. How much greater is B's range?

**ANSWER** _____

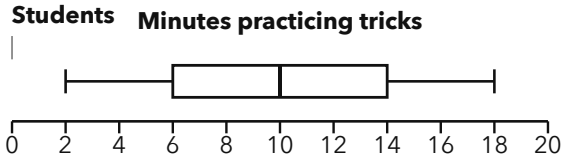
## APPLY IT Show your work

**1** Seven friends logged their weekend gaming hours. Use the dot plot to find the median.




**ANSWER** _____

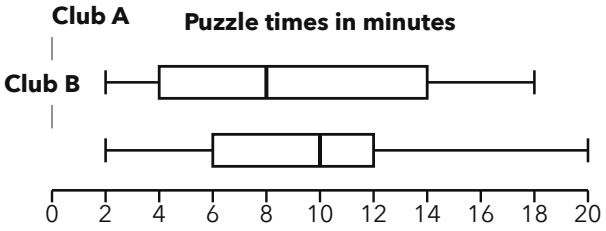
**2** A box plot shows how many minutes students practiced skateboard tricks. What is the range?




**ANSWER** _____

## CHALLENGE One step up

Two clubs timed a puzzle. Which club has the smaller middle 50% spread, and by how many minutes? Explain using the box plots.




WORK SPACE AND ANSWER

**ANSWER KEY** # Data Detective



## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | Find the median score: 3, 7, 9, 11, 15. | **9** |
| 2 | Find the range: 4, 8, 10, 12, 18. | **14** |
| 3 | The scores are 6, 8, 10, 12. If 14 is added, by how much does the median increase? | **1** |
| 4 | Set A is 2, 4, 6, 10. Set B is 2, 4, 6, 16. How much greater is B's range? | **6** |

## PART 2 · APPLY IT

1. **6 hours** The fourth of seven values is 6, so the median is 6 hours.
2. **16 minutes** Subtract the minimum from the maximum: 18 - 2 = 16 minutes.

## CHALLENGE

**Club B, by 4 minutes. Club A's middle 50% spread is 14 - 4 = 10 minutes; Club B's is 12 - 6 = 6 minutes.**

For the challenge, accept an explanation that compares the lengths of the boxes or correctly subtracts Q1 from Q3 for each club.