LESSON MAKER PRO

Spot the Spread

Compare where data gather and how far they reach.

GRADE 7 · 7.DS.B.3.a

7.DS.B.3.a "Use histograms and other visualizations to describe similarities and differences in the range, shape, and clustering of the data sets."

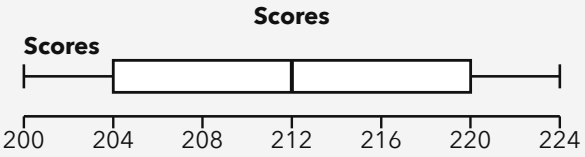
NAME _____ DATE _____

READ THE DISPLAY

Range is the largest value minus the smallest value. In a histogram, tall bars show where values gather. Compare bar heights from left to right to describe the shape.

WORKED EXAMPLE

What is the range shown in the box plot?



1. Read the smallest value, 200, and the largest value, 224.
2. Subtract: 224 - 200 = 24.

Answer: 24

PRACTICE 4 problems

1 Set A: 1, 3, 5, 7. Set B: 2, 4, 6, 8. Find both ranges.

ANSWER _____

2 For 2, 8, 12, 15, 16, how many values fall in 10-19?

ANSWER _____

3 For 1, 4, 11, 18, 19, which histogram bar would be taller: 0-9 or 10-19?

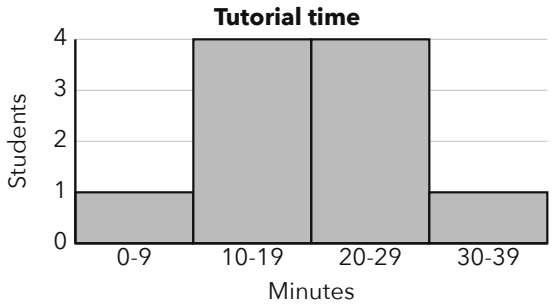
ANSWER _____

4 Set A: 1, 2, 3, 13. Set B: 1, 11, 12, 13. Which set has more values in 0-4?

ANSWER _____

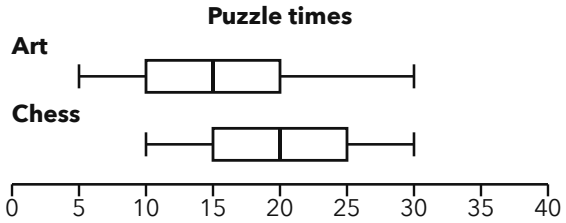
APPLY IT Show your work

1 Students tracked the minutes they spent watching game tutorials. Where do the times cluster? Describe the histogram's shape.



ANSWER _____

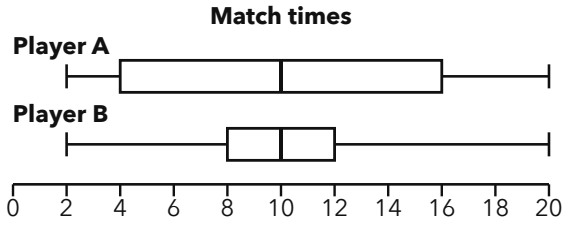
2 Two clubs timed a puzzle. Which club has the larger range, and by how many minutes?



ANSWER _____

CHALLENGE One step up

Two players tracked match times. Their ranges match. Whose middle 50% is more tightly clustered? Give both IQRs.



WORK SPACE AND ANSWER

ANSWER KEY # Spot the Spread

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Set A: 1, 3, 5, 7. Set B: 2, 4, 6, 8. Find both ranges.	**A: 6; B: 6**
2	For 2, 8, 12, 15, 16, how many values fall in 10-19?	**3**
3	For 1, 4, 11, 18, 19, which histogram bar would be taller: 0-9 or 10-19?	**10-19**
4	Set A: 1, 2, 3, 13. Set B: 1, 11, 12, 13. Which set has more values in 0-4?	**Set A**

PART 2 · APPLY IT

1. **The times cluster in 10-29 minutes. The bars rise to a flat middle, then fall in a roughly symmetric shape.** The two middle bars contain 8 of the 10 times. Their equal heights and the equal, shorter end bars show the shape.
2. **Art, by 5 minutes.** Art's range is 30 - 5 = 25 minutes. Chess's range is 30 - 10 = 20 minutes.

CHALLENGE

Player B. Player A's IQR is 16 - 4 = 12 minutes; Player B's IQR is 12 - 8 = 4 minutes.

Accept 'middle two intervals' for the tutorial-time cluster. The challenge compares the widths of the boxes, not the full ranges.