

Plot It Right

Show data clearly on number lines.

GRADE 6 • 6.SP.B.4

CCSS.Math.Content.6.SP.B.4 "Display numerical data in plots on a number line, including dot plots, histograms, and box plots."

NAME _____

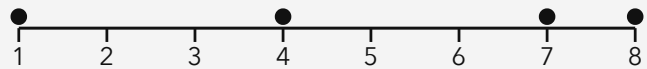
DATE _____

CHOOSE THE DISPLAY

A dot plot puts one dot above each data value, stacking dots when values repeat. A histogram counts values in equal intervals, and a box plot marks the minimum, first quartile, median, third quartile, and maximum.

WORKED EXAMPLE

The dot plot shows four data values. Find the range.



1. The least value is 1.
2. The greatest value is 8.
3. Subtract: $8 - 1 = 7$.

Answer: 7

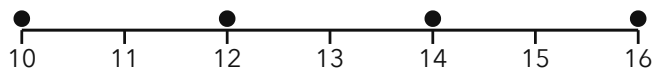
PRACTICE 4 problems

- 1** Make a dot plot for 3, 3, 6, 9, 9.



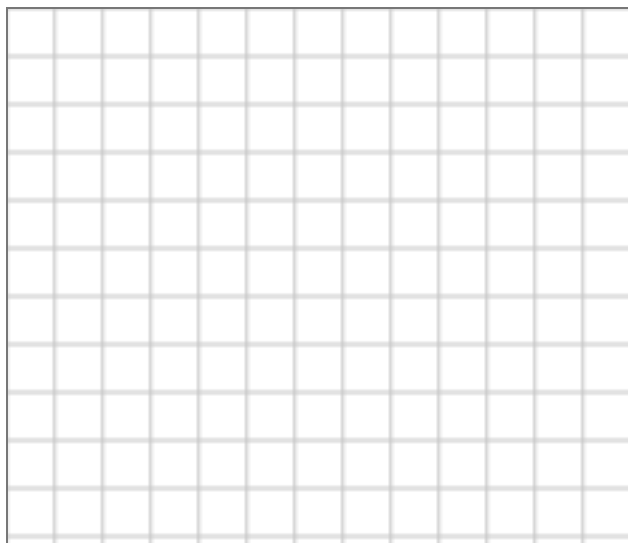
ANSWER _____

- 2 Use the dot plot. Find the range.



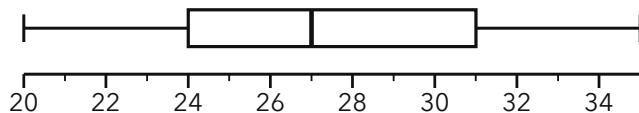
ANSWER _____

- 3 Make a histogram for 10, 11, 12, 13, 13, 15, 16, 18. Use intervals 10-12, 13-15, and 16-18.



ANSWER _____

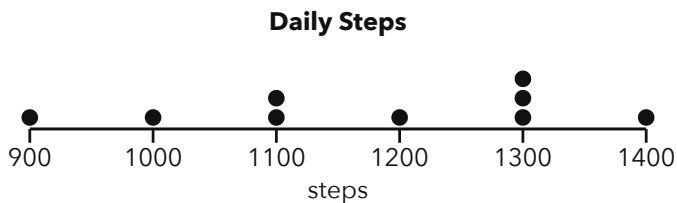
- 4 A box plot has minimum 20, first quartile 24, median 27, third quartile 31, and maximum 35. What interval contains the middle 50% of the data?



ANSWER _____

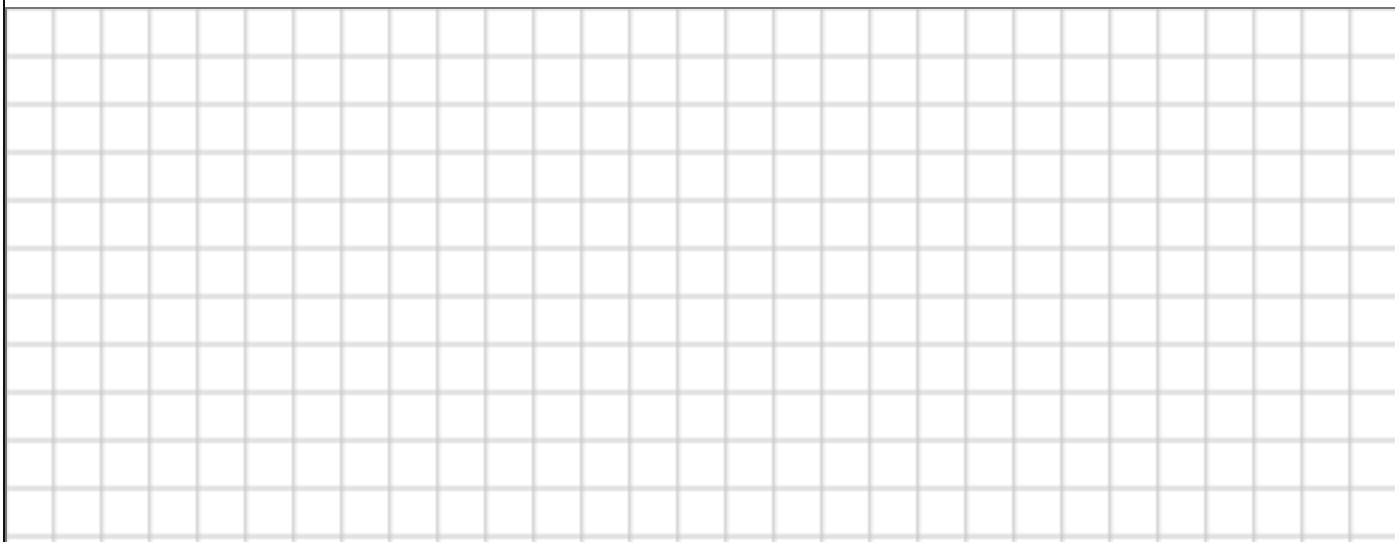
APPLY IT Show your work

- 1** Mina's activity club recorded daily steps. Use the dot plot. What is the range, and how many students took at least 1300 steps?



ANSWER _____

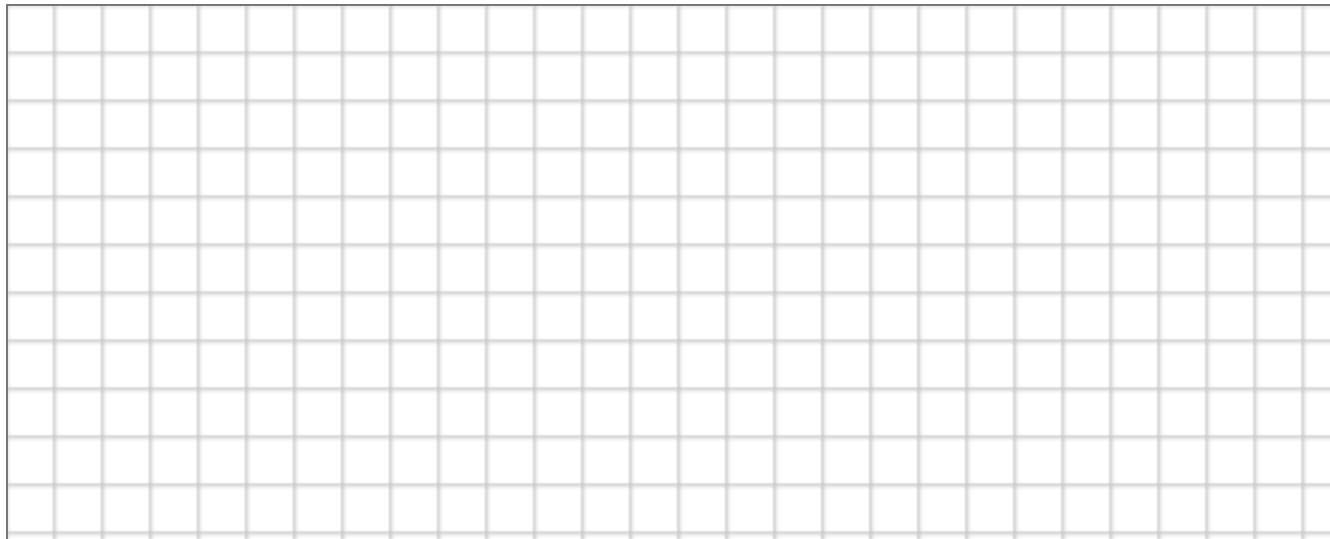
- 2** Skateboard practice times, in minutes, were 18, 21, 23, 26, 29, 31, 34. Make a box plot and give its five-number summary.



ANSWER _____

CHALLENGE One step up

Team A recorded 12, 14, 16, 18, 20, 22, 24, 26. Team B recorded 10, 16, 18, 18, 20, 20, 22, 28. Make box plots on the same number line. Which team has the smaller range? Explain.



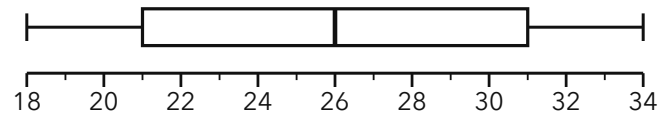
PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Make a dot plot for 3, 3, 6, 9, 9.	3: 2 dots; 6: 1 dot; 9: 2 dots
2	Use the dot plot. Find the range.	6
3	Make a histogram for 10, 11, 12, 13, 13, 15, 16, 18. Use intervals 10-12, 13-15, and 16-18.	10-12: 3; 13-15: 3; 16-18: 2
4	A box plot has minimum 20, first quartile 24, median 27, third quartile 31, and maximum 35. What interval contains the middle 50% of the data?	24 to 31

PART 2 • APPLY IT

1. **Range: 500 steps; 4 students took at least 1300 steps.** Subtract 900 from 1400 for the range. Count the dots at 1300 and 1400.

2. **Minimum 18, first quartile 21, median 26, third quartile 31, maximum 34.** The middle value is 26. Find the middle value of the three values below and above 26 for the quartiles.

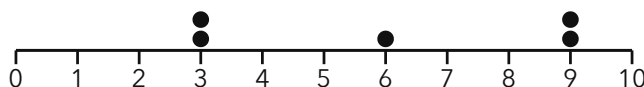


CHALLENGE

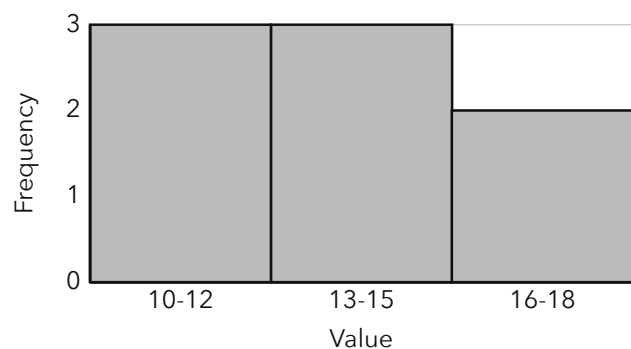
Team A: minimum 12, first quartile 15, median 19, third quartile 23, maximum 26. Team B: minimum 10, first quartile 17, median 19, third quartile 21, maximum 28. Team A has the smaller range: 14 compared with 18 for Team B. Team B has the smaller interquartile range, so the measure of spread matters.

Accept correctly drawn plots with equivalent dot placement and labeled scales. For box plots, accept quartiles found by taking the median of each half after excluding the overall median.

PRACTICE 1 • SAMPLE FIGURE



PRACTICE 3 · SAMPLE FIGURE



CHALLENGE · SAMPLE FIGURE

