LESSON MAKER PRO

Spot the Spread

Make plots and notice what stands out.

GRADE 6 · MT.6.SP.4

MT.6.SP.4 "Display numerical data in plots on a number line, including dot plots, histograms, and box plots, and describe any overall pattern and any striking deviations from the overall pattern with reference to the context from which the data were..."

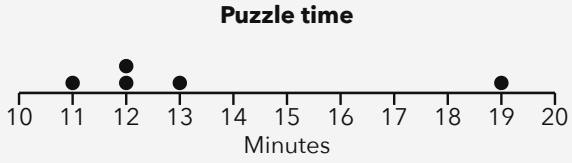
NAME _____ DATE _____

LOOK AT THE DATA

Plots on a number line show where values gather and where they spread out. In a dot plot, each dot stands for one value. Look for a group of nearby values and any value far from that group.

WORKED EXAMPLE

The dot plot shows minutes students spent on a puzzle. Describe the pattern and one striking difference.



1. Count four dots from 11 to 13 minutes.
2. Find the lone dot at 19 minutes.
3. Compare it with the main group.

Answer: Four students took 11 to 13 minutes. One took 19 minutes, much longer than the others.

PRACTICE 4 problems

1 Draw a dot plot for minutes spent reading: 0, 0, 1, 2, 6. Where do most values gather?

ANSWER _____

2 Sketch a box plot for 21, 22, 23, 24, 25, 26, 27. What is the median?

ANSWER _____

3 Make a histogram for 30, 31, 34, 35, 36, 38, 39, 43. Use bins 30-34, 35-39, and 40-44. Which bin has the most values?

ANSWER _____

4 Clip lengths, in seconds, are 41, 42, 42, 43, 70. Describe the pattern and a striking difference.

ANSWER _____

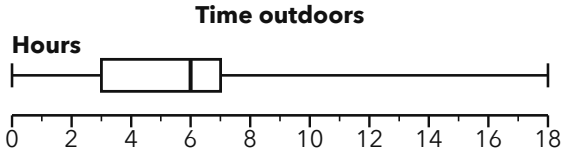
APPLY IT Show your work

1 Students tracked their gaming time last weekend. How many played at least 4 hours? Which range was most common?



ANSWER _____

2 The box plot shows hours students spent outdoors last weekend. What is the median? What suggests some students spent far more time outdoors?



ANSWER _____

CHALLENGE One step up

Trick-practice times, in minutes, are 1, 2, 2, 3, 3, 4, 16. Sketch a box plot and explain which part shows an unusually long time.

WORK SPACE AND ANSWER

ANSWER KEY

Spot the Spread

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Draw a dot plot for minutes spent reading: 0, 0, 1, 2, 6. Where do most values gather?	**Place two dots at 0 and one dot each at 1, 2, and 6. Most values gather from 0 to 2 minutes.**
2	Sketch a box plot for 21, 22, 23, 24, 25, 26, 27. What is the median?	**The box plot has a minimum of 21, Q1 of 22, median of 24, Q3 of 26, and maximum of 27. The median is 24.**
3	Make a histogram for 30, 31, 34, 35, 36, 38, 39, 43. Use bins 30-34, 35-39, and 40-44. Which bin has the most values?	**The bars have heights 3, 4, and 1, in order. The 35-39 bin has the most values.**
4	Clip lengths, in seconds, are 41, 42, 42, 43, 70. Describe the pattern and a striking difference.	**Four clips last 41 to 43 seconds. The 70-second clip is much longer.**

PART 2 · APPLY IT

1. **6 students played at least 4 hours. The 2-3 hour range was most common.** Add the heights of the 4-5 and 6-7 bars: 4 + 2 = 6. The 2-3 bar is tallest.
2. **The median is 6 hours. The long whisker from 7 to 18 hours shows that the highest times extend far beyond the box.** Read the median line at 6. Compare the upper whisker, from 7 to 18, with the much shorter lower whisker.

CHALLENGE

The box plot has a minimum of 1, Q1 of 2, median of 3, Q3 of 4, and maximum of 16. The long whisker from 4 to 16 shows that one practice time was much longer than the others.

Accept clear sketches with correctly placed dots, bars, or five-number summaries. For descriptions, accept wording that identifies the main group and the unusually high value.