LESSON MAKER PRO

Data Detective Lab

Read displays, find patterns, and compare data.

GRADE 6 · TEKS 6.13.A

6.13.A "interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots; and"

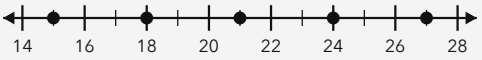
NAME _____ DATE _____

READ THE DATA

Use the scale and labels to find what each mark or section means. To find range, subtract the least value from the greatest value. In a box plot, subtract Q1 from Q3 to find the interquartile range, or IQR.

WORKED EXAMPLE

The number line shows five data values, with one dot for each value. What is the range?



1. The least data value is 15.
2. The greatest data value is 27.
3. Subtract: 27 - 15 = 12.

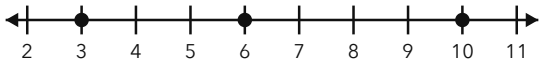
Answer: 12

PRACTICE 6 problems

1 Read the stem-and-leaf plot. What is the median? Stem | Leaves 3 | 1 4 6 4 | 0 2 The stem is the tens digit.

ANSWER _____

2 Each dot on the number line is one data value. What is the median?



ANSWER _____

3 A histogram has these frequencies: 30-39 has 2 students, 40-49 has 3 students, and 50-59 has 6 students. How many students are represented?

ANSWER _____

4 A box plot has a minimum of 32, Q1 of 36, median of 39, Q3 of 44, and maximum of 48. What is the IQR?

ANSWER _____

5 A dot plot has 3 dots above 2, 5 dots above 3, and 2 dots above 4. What is the mode?

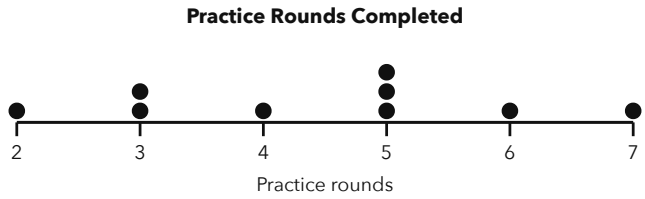
ANSWER _____

6 A box plot has a minimum of 33, Q1 of 37, median of 47, Q3 of 56, and maximum of 63. Find the range and the IQR.

ANSWER _____

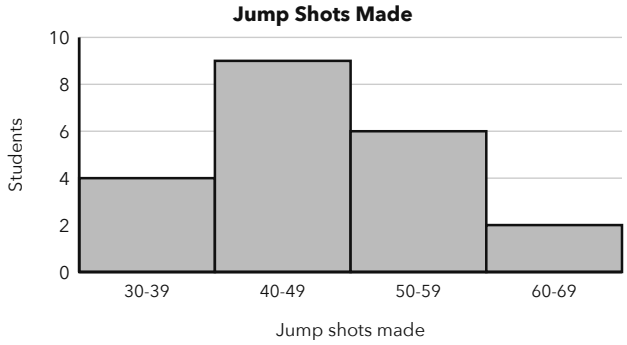
APPLY IT Show your work

1 A gaming club tracked the number of practice rounds completed by students before a tournament. Use the dot plot to find the median and the range.



ANSWER _____

2 Students recorded the number of jump shots they made during basketball practice. How many students made 50 or more shots? Which interval has the most students?



ANSWER _____

CHALLENGE One step up

Two robotics teams made box plots of their test scores. Team A has Q1 = 48, median = 54, and Q3 = 61. Team B has Q1 = 50, median = 55, and Q3 = 60. Which team has the higher typical score? Which team is more consistent? Explain using the medians and IQRs.

WORK SPACE AND ANSWER

ANSWER KEY

Data Detective Lab

GRADE 6 · TEKS 6.13.A

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Read the stem-and-leaf plot. What is the median? Stem | Leaves 3 | 1 4 6 4 | 0 2 The stem is the tens digit.	**36**
2	Each dot on the number line is one data value. What is the median?	**6**
3	A histogram has these frequencies: 30-39 has 2 students, 40-49 has 3 students, and 50-59 has 6 students. How many students are represented?	**11**
4	A box plot has a minimum of 32, Q1 of 36, median of 39, Q3 of 44, and maximum of 48. What is the IQR?	**8**
5	A dot plot has 3 dots above 2, 5 dots above 3, and 2 dots above 4. What is the mode?	**3**
6	A box plot has a minimum of 33, Q1 of 37, median of 47, Q3 of 56, and maximum of 63. Find the range and the IQR.	**Range: 30; IQR: 19**

PART 2 · APPLY IT

1. **Median: 5; range: 5** There are 9 data values, so the middle value is the fifth value, 5. Subtract 2 from 7 to get a range of 5.
2. **8 students; 40-49** Add the frequencies for 50-59 and 60-69: 6 + 2 = 8. The tallest bar has frequency 9 and represents 40-49.

CHALLENGE

Team B has the higher typical score because its median is 55, compared with 54 for Team A. Team B is more consistent because its IQR is 10, which is less than Team A's IQR of 13.

Accept equivalent wording for the interval answers, such as “40 through 49.” For the challenge, students should identify Team B and support both claims with the correct median and IQR values.