

Data Plot Studio

Build and read dot plots and histograms.

GRADE 6 • NY-6.SP.4

NY-6.SP.4 "Display quantitative data in plots on a number line, including dot plots, and histograms."

NAME _____

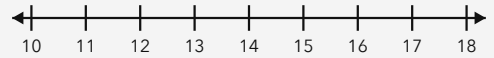
DATE _____

SHOW THE DATA

In a dot plot, each dot stands for one data value. Stack dots when values repeat. In a histogram, group data into equal-size intervals and use bar heights to show each interval's frequency.

WORKED EXAMPLE

Use the number line to make a dot plot for 11, 13, 13, 15, 17.

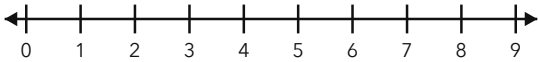


1. Place 1 dot above 11.
2. Stack 2 dots above 13.
3. Place 1 dot above 15 and 1 dot above 17.

Answer: 11: 1 dot; 13: 2 dots; 15: 1 dot; 17: 1 dot

PRACTICE 4 problems

- 1** Use the number line to draw a dot plot for 1, 1, 3, 6, 6, 6, 8.



ANSWER _____

- 2** Sort 21, 24, 25, 27, 28, 32 into histogram intervals 20-24, 25-29, and 30-34. Write each frequency.

ANSWER _____

- 3** A class records each student's exact number of pages read. Choose the better display, a dot plot or a histogram. Explain why.

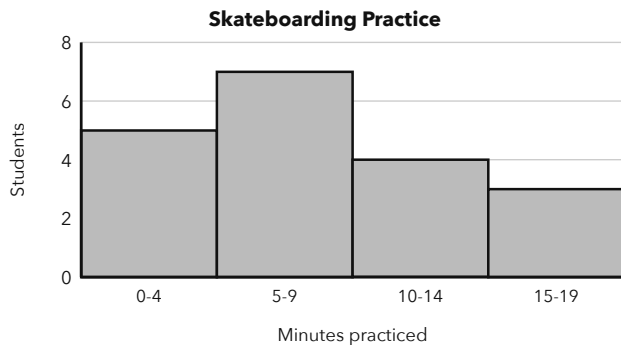
ANSWER _____

- 4** For 40, 42, 42, 43, 43, 43, 45, how many dots go above 43? How many data values are there?

ANSWER _____

APPLY IT Show your work

- 1** This histogram shows minutes students practiced skateboarding. How many practiced 5-9 minutes? How many students are shown?



ANSWER _____

- 2** After an arcade game, Jalen's scores were 2, 2, 4, 5, 5, 5, 7, 8. Make a dot plot. Which score occurs most often?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Make a histogram for 30, 31, 34, 35, 37, 39, 40, 42, 44 using intervals 30-34, 35-39, and 40-44. What do the equal bar heights tell you?

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Use the number line to draw a dot plot for 1, 1, 3, 6, 6, 6, 8.	1: 2 dots; 3: 1 dot; 6: 3 dots; 8: 1 dot
2	Sort 21, 24, 25, 27, 28, 32 into histogram intervals 20-24, 25-29, and 30-34. Write each frequency.	20-24: 2; 25-29: 3; 30-34: 1
3	A class records each student's exact number of pages read. Choose the better display, a dot plot or a histogram. Explain why.	Dot plot. It shows each exact page total and repeats.
4	For 40, 42, 42, 43, 43, 43, 45, how many dots go above 43? How many data values are there?	3 dots; 7 data values

PART 2 • APPLY IT

- 7 students; 19 students** Read 7 from the 5-9 bar. Add $5 + 7 + 4 + 3$ to find 19 students.
- 5** Plot one dot for each score. The stack above 5 has 3 dots, the most.

CHALLENGE

30-34: 3; 35-39: 3; 40-44: 3. Each interval has the same frequency.

Accept correctly drawn dot plots with dots stacked above the listed values. Histogram bars may be drawn vertically or horizontally if intervals and frequencies are correct.