

Count Every Value

Report how many observations are in a data set.

GRADE 6 • NY-6.SP.5.a

NY-6.SP.5.a "Report the number of observations."

NAME _____

DATE _____

COUNT THE OBSERVATIONS

The number of observations is the total number of data values collected. Count each value once, even when values repeat. In a data display, each dot or each unit of frequency represents an observation.

WORKED EXAMPLE

A pet-sitting log lists the number of minutes spent with five pets: 61, 63, 63, 66, 69. Report the number of observations.

1. Read each value in the list.
2. Count the values: 61, 63, 63, 66, 69.
3. There are 5 values total.

Answer: 5 observations

PRACTICE 6 problems

- 1** A student records the numbers of books read by five friends: 7, 9, 9, 11, 13. Report the number of observations.

ANSWER _____

- 2** A running club records these lap times in minutes: 20, 22, 22, 24, 24, 24, 26. Report the number of observations.

ANSWER _____

- 3** A science team measures the heights of six seedlings: 3.5 cm, 4 cm, 4 cm, 4.5 cm, 5 cm, 5.5 cm. Report the number of observations.

ANSWER _____

- 4** A weather journal lists these afternoon temperatures in degrees: 31, 32, 34, 35, 35, 36, 38, 39, 39. Report the number of observations.

ANSWER _____

- 5** A data set is $\frac{1}{2}$, 1, 1, $\frac{3}{2}$, 2, 2, 2, $\frac{5}{2}$. Report the number of observations.

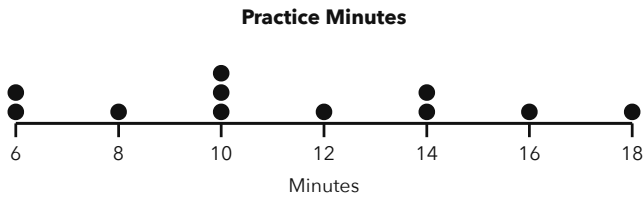
ANSWER _____

- 6** A game designer asks ten students to rate a new level. The ratings are 2, 3, 3, 4, 4, 4, 5, 5, 6, 6. Report the number of observations.

ANSWER _____

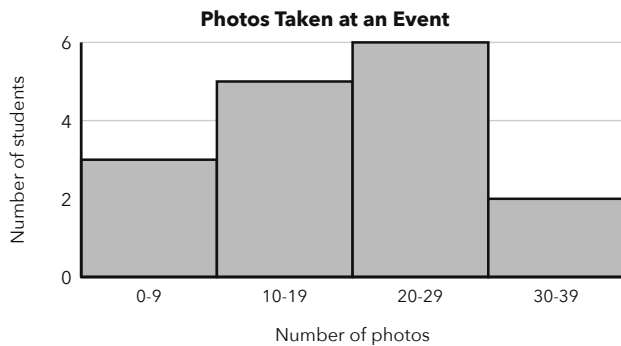
APPLY IT Show your work

- 1** The dot plot shows how many minutes students practiced a game skill after school. How many student observations are shown?



ANSWER _____

- 2** A school media club made a histogram of the number of photos students took during an event. How many student observations are represented?



ANSWER _____

CHALLENGE One step up

This box plot summarizes daily screen-free minutes for members of a club. Can you report the exact number of observations from this box plot? Explain your reasoning.



WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A student records the numbers of books read by five friends: 7, 9, 9, 11, 13. Report the number of observations.	5 observations
2	A running club records these lap times in minutes: 20, 22, 22, 24, 24, 24, 26. Report the number of observations.	7 observations
3	A science team measures the heights of six seedlings: 3.5 cm, 4 cm, 4 cm, 4.5 cm, 5 cm, 5.5 cm. Report the number of observations.	6 observations
4	A weather journal lists these afternoon temperatures in degrees: 31, 32, 34, 35, 35, 36, 38, 39, 39. Report the number of observations.	9 observations
5	A data set is $1/2$, 1, 1, $3/2$, 2, 2, 2, $5/2$. Report the number of observations.	8 observations
6	A game designer asks ten students to rate a new level. The ratings are 2, 3, 3, 4, 4, 4, 5, 5, 6, 6. Report the number of observations.	10 observations

PART 2 • APPLY IT

- 11 observations** Count all the dots in the dot plot. There are 11 dots, so there are 11 observations.
- 16 observations** Add the frequencies in all four bars: $3 + 5 + 6 + 2 = 16$. The histogram represents 16 students.

CHALLENGE

No. A box plot shows the minimum, first quartile, median, third quartile, and maximum, but it does not show the exact number of observations.

Accept a number with or without the word “observations” for the practice and application items. For the challenge, accept an explanation that the five values shown on a box plot are summary measures, not the total number of data values.