LESSON MAKER PRO

Histogram Question Quest

Ask questions that produce numerical data for histograms.

GRADE 7 · 7.PS.2.a

7.PS.2.a "Formulate questions that require the collection or acquisition of data with a focus on histograms."

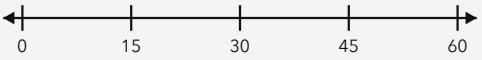
NAME _____ DATE _____

ASK FOR NUMBERS

A histogram shows how often numerical data fall in equal-size intervals. Write a question that names a group, a measurement with units, and a time or situation so the answers can vary.

WORKED EXAMPLE

A librarian wants histogram data about reading after school. Write a survey question. Use the intervals 0-14, 15-29, 30-44, and 45-59 minutes.



1. Name the group, students.
2. Choose a numerical measurement, reading minutes.
3. Add the time, after school.

Answer: How many minutes does each student read after school?

PRACTICE 4 problems

1 Which survey question gives data for a histogram? A. What is your favorite sport? B. How many minutes do you walk a dog each week? C. What color is your backpack?

ANSWER _____

2 A science club wants a histogram of backpack mass. Write one question that collects the needed data in grams.

ANSWER _____

3 Which data could be organized in a histogram? A. Students' favorite lunch foods B. Numbers of books students borrowed this month

ANSWER _____

4 A coach will collect sprint times in seconds from 61 through 80. List five bins of width 4.

ANSWER _____

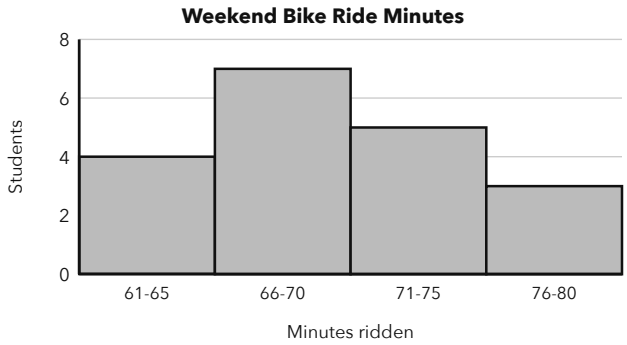
APPLY IT Show your work

1 The drama club will make a histogram of minutes members rehearsed at home last week. The bins are 81-90, 91-100, 101-110, and 111-120. Write the survey question.

WORK SPACE

ANSWER _____

2 Use the histogram to write one question it can answer.



ANSWER _____

CHALLENGE One step up

A media club will survey classmates about text messages sent yesterday. Write a histogram question, list four equal-width bins from 121 through 160, and explain why a histogram fits.

WORK SPACE AND ANSWER

ANSWER KEY

Histogram Question Quest

GRADE 7 · 7.PS.2.a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Which survey question gives data for a histogram? A. What is your favorite sport? B. How many minutes do you walk a dog each week? C. What color is your backpack?	**B. How many minutes do you walk a dog each week?**
2	A science club wants a histogram of backpack mass. Write one question that collects the needed data in grams.	**What is the mass, in grams, of each science club member's backpack?**
3	Which data could be organized in a histogram? A. Students' favorite lunch foods B. Numbers of books students borrowed this month	**B. Numbers of books students borrowed this month**
4	A coach will collect sprint times in seconds from 61 through 80. List five bins of width 4.	**61-64, 65-68, 69-72, 73-76, 77-80**

PART 2 · APPLY IT

1. **How many minutes did each drama club member rehearse at home last week?** The question identifies the group, measures minutes, and gives the time period. Each response can be placed in one listed interval.
2. **How many students rode a bike for each time interval last weekend?** The histogram groups numerical ride times into intervals. A suitable question asks about the number of students in each interval.

CHALLENGE

How many text messages did each student in our class send yesterday? Bins: 121-130, 131-140, 141-150, 151-160. A histogram fits because the answers are numerical and can vary.

Accept equivalent questions that name a group, numerical measurement and unit, and a clear time or situation. Accept equivalent bin notation when the same values are grouped into equal-width intervals.