

Measure, Record, and Plot

Measure real objects. Put every measurement on a line plot.

GRADE 2 • 2.MD.D.9

CCSS.Math.Content.2.MD.D.9 "Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot..."

NAME _____

DATE _____

Materials and setup

Teacher: provide a centimeter ruler and six straight strips, each between 1 and 12 centimeters long. Include some similar lengths. Label them A-F. Students measure the real strips, not a printed picture.

Use a pencil. On each plot, one dot means one strip. A line plot may use dots instead of Xs; this worksheet uses dots throughout.

SHOW LENGTH DATA

Start a ruler at 0. Read the other end to the nearest whole centimeter. A line plot uses one dot for each measurement. Stack dots when lengths repeat. Its scale counts by whole numbers.

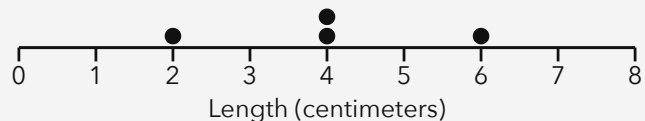
WORKED EXAMPLE

A teacher measured four strips: 2, 4, 4, and 6 centimeters. Read the line plot. Why are two dots above 4?

1. Mark a whole-number scale and label centimeters.
2. Put one dot for each strip; stack the two dots at 4.

Answer: Two strips measured 4 centimeters. The four dots represent four strips.

Four example strips



PRACTICE 4 problems

- 1** Measure strips A-F to the nearest whole centimeter. Write each length in the table.

MY STRIP MEASUREMENTS

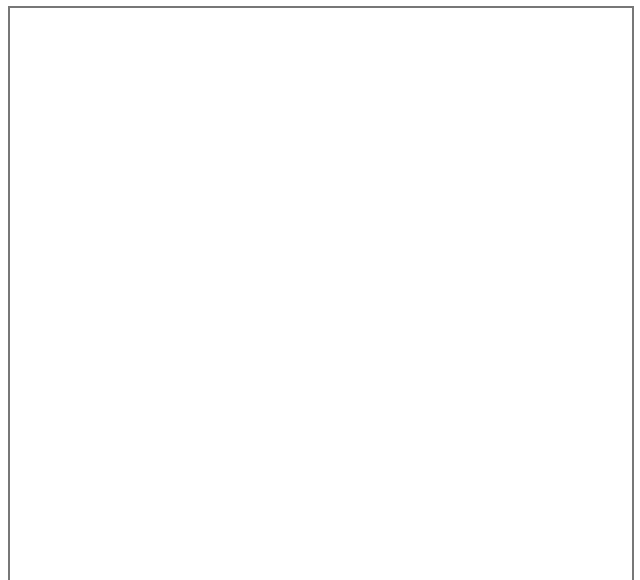
Strip	Length (cm)
A	___
B	___
C	___
D	___
E	___
F	___

ANSWER _____

- 3** Look at your line plot. How many dots did you draw? How does that number match the strips you measured?

ANSWER _____

- 2** Use your six measurements from question 1. In the box, make a line plot. Draw a horizontal scale from 0 to 12, marking every whole number. Label it Length (centimeters). Give the plot a title. Draw one dot for each strip. Stack repeated lengths.



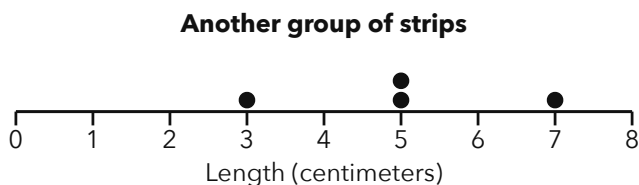
ANSWER _____

- 4** Use your line plot. Write the shortest and longest measured lengths. Are any lengths repeated? Tell how the dots show this.

ANSWER _____

APPLY IT Show your work

- 1** Four other strips were measured. Read their line plot. How many strips measured 5 centimeters?



ANSWER _____

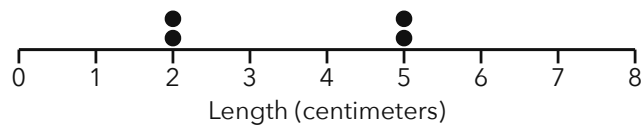
- 2** These strips measure 1, 3, 3, 3, and 6 centimeters. In the box, make a line plot with a whole-number scale from 0 to 8, a title, and a centimeter label.

ANSWER _____

CHALLENGE One step up

Read this line plot. Sam says there are only two strips because dots appear at two lengths. Is Sam right? Explain.

Check Sam's count



WORK SPACE AND ANSWER

PRACTICE 1

Measure strips A-F to the nearest whole centimeter. Write each length in the table.

Measurements vary. Check that each of the six labeled strips has one whole-centimeter measurement.

PRACTICE 2

Use your six measurements from question 1. In the box, make a line plot. Draw a horizontal scale from 0 to 12, marking every whole number. Label it Length (centimeters). Give the plot a title. Draw one dot for each strip. Stack repeated lengths.

Plots vary. The 0-12 scale has equal whole-number intervals, a title and centimeter label. Exactly six dots match the recorded measurements, including repeats.

PRACTICE 3

Look at your line plot. How many dots did you draw? How does that number match the strips you measured?

Six dots, one for each of the six strips.

PRACTICE 4

Use your line plot. Write the shortest and longest measured lengths. Are any lengths repeated? Tell how the dots show this.

Answers depend on measurements. The leftmost and rightmost dots give the shortest and longest; a stack shows a repeated length. If none repeat, each occupied length has one dot.

APPLY IT 1

Two strips.

Count the two separate dots stacked above 5.

CHALLENGE

No. There are four strips: two at 2 centimeters and two at 5 centimeters. Count every dot, not just the occupied lengths.

Check real measurement technique: ruler starts at 0, whole centimeters are recorded, and every strip appears once. The learner-created plot has variable answers; compare it with the learner's table. Do not require different lengths or invent fixed data for that task. Dots and Xs are valid line-plot marks, but use the stated dot convention here.

APPLY IT 2

Five dots: one at 1, three at 3, and one at 6.
Use equal whole-number intervals; every measurement gets its own dot.

Five practice strips

