LESSON MAKER PRO

Plot It Right

Measure to the nearest quarter inch, then show the data.

GRADE 3 · 3.MD.B.4

CCSS.Math.Content.3.MD.B.4 "Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves..."

NAME _____ DATE _____

SHOW LENGTH DATA

A ruler can show whole inches, halves, and quarters. Write each measurement, then make a line plot by placing one X above the matching number for each item. Use equal spaces on the horizontal scale.

WORKED EXAMPLE

Four ribbon pieces measure 5 1/4 in., 5 1/2 in., 5 1/4 in., and 5 3/4 in. Make a line plot.

1. Write a scale from 5 to 5 3/4, marked every 1/4 inch.
2. Place one X at 5 1/4 for the first ribbon.
3. Place one X at 5 1/2, another X at 5 1/4, and one X at 5 3/4.
4. Count the Xs at each length.

Answer: 5: 0; 5 1/4: XX; 5 1/2: X; 5 3/4: X

PRACTICE 6 problems

1 A paper strip starts at 0 on a ruler and ends halfway between 2 and 3 inches. What is its length?

ANSWER _____

2 Make a line plot for these crayon lengths: 1 1/4 in., 1 3/4 in., 1 1/4 in., 2 in., 1 1/2 in.

ANSWER _____

3 Look at this line plot. Length (in.): 2 | 2 1/4 | 2 1/2 | 2 3/4 X marks: X | XX | X | XX How many objects measure 2 1/4 inches?

ANSWER _____

4 Look at this line plot. Length (in.): 3 | 3 1/4 | 3 1/2 | 3 3/4 X marks: X | X | XXX | X Which length occurs most often?

ANSWER _____

5 Make a line plot for these game-card widths: 3 in., 3 1/2 in., 3 in., 3 1/4 in., 3 1/2 in., 3 in. Then find the total number of cards.

ANSWER _____

6 Four toy car tracks measure 4 1/4 in., 4 3/4 in., 4 1/2 in., and 4 1/4 in. How much longer is the longest track than the shortest track?

ANSWER _____

APPLY IT Show your work

1 At a mini-golf club, six players measure the length of their putts from the hole. The lengths are 2 in., 2 1/4 in., 2 1/2 in., 2 1/4 in., 2 3/4 in., and 2 1/4 in. Make a line plot. Which putt length happens most often?

WORK SPACE

ANSWER _____

2 A class measures five sprouts for a science display. Their heights are 3 in., 3 1/4 in., 3 1/2 in., 3 1/2 in., and 3 3/4 in. Make a line plot. How many sprouts are 3 1/2 inches or taller?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A line plot has these X marks: 4 in. has 1 X, 4 1/4 in. has 2 Xs, 4 1/2 in. has 2 Xs, and 4 3/4 in. has 1 X. One more pencil is measured. What length must it be so that 4 1/2 inches is the only length with the most Xs? Explain your reasoning.

_____

_____

ANSWER KEY

Plot It Right

GRADE 3 · 3.MD.B.4

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A paper strip starts at 0 on a ruler and ends halfway between 2 and 3 inches. What is its length?	**2 1/2 in.**
2	Make a line plot for these crayon lengths: 1 1/4 in., 1 3/4 in., 1 1/4 in., 2 in., 1 1/2 in.	**1 1/4: XX; 1 1/2: X; 1 3/4: X; 2: X**
3	Look at this line plot. Length (in.): 2 | 2 1/4 | 2 1/2 | 2 3/4 X marks: X | XX | X | XX How many objects measure 2 1/4 inches?	**2 objects**
4	Look at this line plot. Length (in.): 3 | 3 1/4 | 3 1/2 | 3 3/4 X marks: X | X | XXX | X Which length occurs most often?	**3 1/2 in.**
5	Make a line plot for these game-card widths: 3 in., 3 1/2 in., 3 in., 3 1/4 in., 3 1/2 in., 3 in. Then find the total number of cards.	**3: XXX; 3 1/4: X; 3 1/2: XX; total: 6 cards**
6	Four toy car tracks measure 4 1/4 in., 4 3/4 in., 4 1/2 in., and 4 1/4 in. How much longer is the longest track than the shortest track?	**1/2 in.**

PART 2 · APPLY IT

1. **2: X; 2 1/4: XXX; 2 1/2: X; 2 3/4: X. The most common length is 2 1/4 in.** Plot one X for each putt length. The length 2 1/4 has three Xs, more than any other length.
2. **3: X; 3 1/4: X; 3 1/2: XX; 3 3/4: X. 3 sprouts are 3 1/2 in. or taller.** Place an X for each sprout height. Count the two sprouts at 3 1/2 and the one sprout at 3 3/4.

CHALLENGE

The pencil must measure 4 1/2 in. It adds a third X at 4 1/2, while every other length has two or fewer Xs.

Accept line plots with Xs stacked above an evenly spaced horizontal scale marked by fourth inches. Accept equivalent wording for the comparison answers, as long as the measurement and count are correct.