LESSON MAKER PRO

Plot and Solve

Use line plots to solve fraction problems.

GRADE 5 · 5.DA.A.16

5.DA.A.16 "Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). a. Add, subtract, multiply, and divide fractions to solve problems involving information presented in line plots."

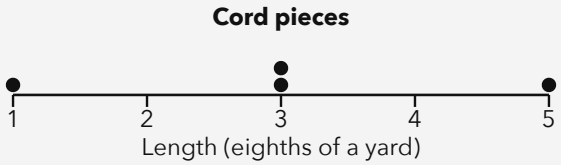
NAME _____ DATE _____

READ THE MARKS

Each mark on a line plot stands for one measurement. When the axis counts eighths, a mark above 4 means 4/8 of a yard. Count the marks you need, then use fraction operations to answer the question.

WORKED EXAMPLE

What is the combined length of the two pieces at 3 on the line plot?

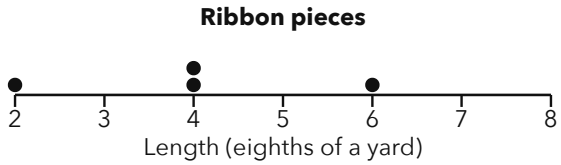


1. There are two marks above 3, so each piece is 3/8 yard long.
2. Add: 3/8 + 3/8 = 6/8 yard.
3. Simplify: 6/8 = 3/4.

Answer: 3/4 yard

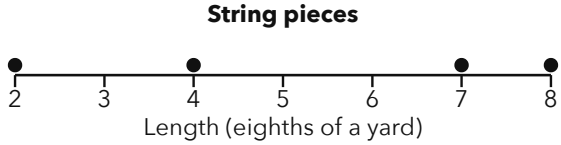
PRACTICE 6 problems

1 What is the total length of all the pieces in the line plot?



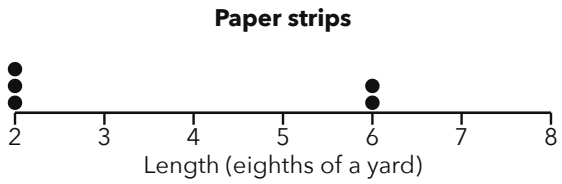
ANSWER _____

2 How much longer is the longest piece than the shortest piece?



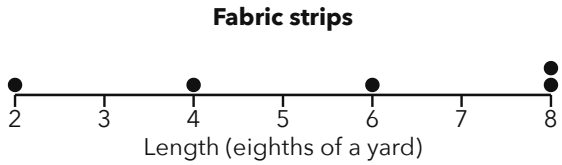
ANSWER _____

3 What is the combined length of the pieces at 6?



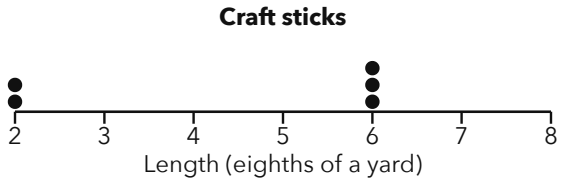
ANSWER _____

4 If both longest pieces are cut into 1/2-yard pieces, how many pieces will there be?



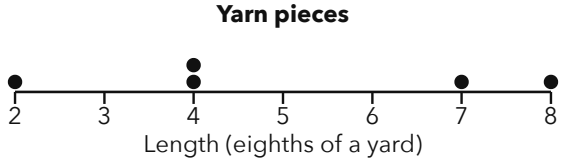
ANSWER _____

5 How much greater is the combined length of the pieces at 6 than the combined length of the pieces at 2?



ANSWER _____

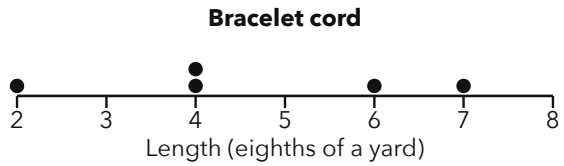
6 How much longer is the piece at 7 than one piece at 4?



ANSWER _____

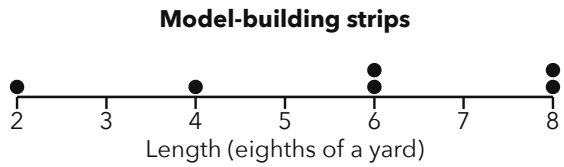
APPLY IT Show your work

1 You are making friendship bracelets. You use both cord pieces at 4 and the piece at 7. How many yards of cord do you use?



ANSWER _____

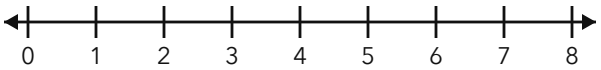
2 You are building a model skate park. You cut the two longest strips in the plot into 1/4-yard pieces. How many pieces can you cut?



ANSWER _____

CHALLENGE One step up

Each tick on the blank axis stands for 1/8 yard. Make a line plot by placing one X above the correct tick for each measurement: 2/8, 4/8, 4/8, 7/8, 7/8, and 8/8 yard. If you share the total length equally among 4 friends, how much does each friend get?



WORK SPACE AND ANSWER

ANSWER KEY

Plot and Solve

GRADE 5 · 5.DA.A.16

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	What is the total length of all the pieces in the line plot?	**2 yards**
2	How much longer is the longest piece than the shortest piece?	**3/4 yard**
3	What is the combined length of the pieces at 6?	**1 1/2 yards**
4	If both longest pieces are cut into 1/2-yard pieces, how many pieces will there be?	**4 pieces**
5	How much greater is the combined length of the pieces at 6 than the combined length of the pieces at 2?	**1 3/4 yards**
6	How much longer is the piece at 7 than one piece at 4?	**3/8 yard**

PART 2 · APPLY IT

1. **1 7/8 yards** Add the lengths shown by the selected marks: 4/8 + 4/8 + 7/8 = 15/8 = 1 7/8 yards.
2. **8 pieces** The two longest strips total 8/8 + 8/8 = 2 yards. Divide 2 by 1/4 to get 8 pieces.

CHALLENGE

The line plot has one X above 2, two above 4, two above 7, and one above 8. Each friend gets 1 yard.

Accept equivalent fractions and mixed numbers. On the challenge plot, each X must represent one measurement.