Make Line Plots and Interpret Data

Name:

Prerequisite: Read a Line Plot

Study the example problem showing how to solve a problem by reading a line plot. Then solve problems 1–7.



Solve.

Rodrigo recorded the weight of each acorn squash he sold at the farmer's market. The weights are shown below.

	$2\frac{1}{4}$	$2\frac{3}{8}$	$2\frac{3}{4}$	$2\frac{1}{4}$	$2\frac{3}{4}$	2 <u>5</u> 8	$2\frac{1}{2}$	$2\frac{1}{4}$	$2\frac{3}{4}$	$2\frac{1}{8}$
-	$2\frac{1}{2}$	2 7 /8	$2\frac{1}{8}$	$2\frac{1}{2}$	$2\frac{1}{4}$	$2\frac{3}{4}$	$2\frac{1}{8}$	$2\frac{5}{8}$	$2\frac{3}{8}$	$2\frac{1}{4}$

4 Use the data in the table to complete the line plot.



- 5 What is the difference between the weights of the heaviest and lightest squash sold?
- 6 Which weight includes the greatest number of squashes? Explain how you know.

7 What is the total weight of all the squashes that weigh less than $2\frac{1}{2}$ pounds? Show your work.

Solution: _

Make a Line Plot

Study the example problem showing how to make a line plot. Then solve problems 1–4.

Example

Rosa's grandfather gave her a box of old foreign coins. She measured the diameter of each coin. Then she made a table that showed the diameters and how many coins she had of each diameter. How can Rosa show this data in a line plot?

Make one X to stand for each coin in the

table. The line plot below shows the number

of coins with a $\frac{3}{8}$ -inch diameter.

Diameter (in inches)	Number of Coins
<u>3</u> 8	3
<u>5</u> 8	8
<u>3</u> 4	11
$\frac{7}{8}$	5



 Plot the rest of the data from the table in the example on the line plot.

2 Describe how the data in the line plot are clustered.

Solve.

Gabe has a collection of stamps. He recorded the heights of the stamps along with the number of stamps at each height.

Height (in inches)	Number of Stamps
$\frac{1}{2}$	2
1	5
$1\frac{1}{2}$	9
2	6
$2\frac{1}{2}$	3
3	1



3 Make a line plot to show the data in the table.

Below are widths in inches of some of Gabe's stamps. Make a line plot to show this data. Then write a statement to describe the distribution of the data.

 $\frac{3}{4}$, 1, 1 $\frac{1}{2}$, 1 $\frac{1}{4}$, 1 $\frac{1}{2}$, 1, 1 $\frac{3}{4}$, 1 $\frac{3}{4}$, 1 $\frac{1}{2}$, $\frac{1}{2}$



Name:

Solve Problems Using Data in a Line Plot

Study the example showing how to solve a problem using data in a line plot. Then solve problems 1–7.



How long a line can you make using all the ³/₈-inch strips?
Show your work.

Solution: _

2 How long a line can you make using all the $\frac{5}{8}$ -inch strips?

3 Miguel wants to make a 5-inch line. Can he do this using the $\frac{1}{2}$ -inch strips that he has? Explain.

Use the data in the line plot to solve.



Solution: _____

5 How many times longer are the longest strips than the shortest strips? Explain.

6 Can Miguel use $\frac{3}{4}$ -inch strips to make a line that is exactly 5 inches long? Explain.

7 How could Miguel use strips of different lengths to make a 4-inch line?

Lesson 23

Name:

Make Line Plots and Interpret Data

Solve the problems.

Kelly works at a grocery store. One day, she recorded the weight of each melon before she put it in a bin. The line plot shows the data.



Weight of Melons (pounds)

- Look at the data in the line plot. Which statement about the data is true?
 - A There are 3 melons at the heaviest weight.
 - **B** The heaviest melon is $2\frac{1}{2}$ times the weight of the lightest melon.
 - C All of the melons weigh between 1 and 3 pounds.
 - **D** The weight of the greatest number of melons is
 - $1\frac{1}{2}$ pounds.

Shrina chose **B** as the correct answer. How did she get that answer?

Be sure to check each statement against the data in the line plot.

2 Describe the distribution of the data in the line plot.

Do the weights in the line plot have about the same number of Xs or do some have more than others?

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Solve.

Dorothy has a basket of apples. She weighs them and makes a table to show how many apples she has of each weight.

Weight (pounds)	Number of Apples
$\frac{1}{4}$	3
<u>3</u> 8	6
$\frac{1}{2}$	5
<u>5</u> 8	4
<u>3</u> 4	2

3 Make a line plot to show the data.

I would first look at the fractions that I need to show and decide what scale to use.

What is the total weight of Dorothy's apples?Show your work.

What is the total weight of the apples for each weight?

Solution: _

5 Dorothy groups apples that have the same weight in a basket. She has five baskets. Do any baskets have the same weight? Explain.

This means that all the $\frac{1}{4}$ -pound apples are in one basket, all the $\frac{3}{8}$ -pound apples are in another basket, and so on.