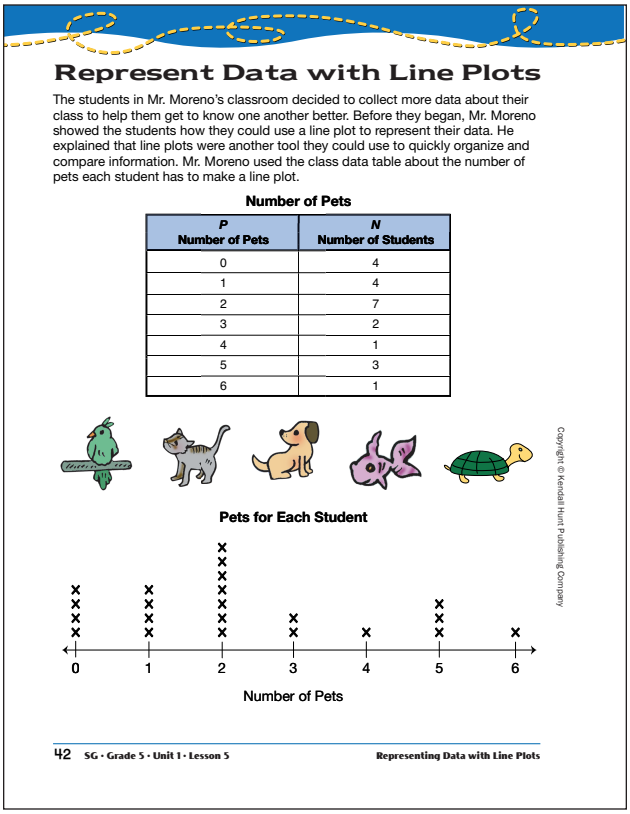
Student Guide

Represent Data with Line Plots (SG pp. 42–43) Questions 1–5

1. **A.*** The number of pets students have.
   B.* The number of students that have that number of pets.
2. **A.*** The mode is the number that has the most Xs above it.
   B.* Possible response: You can count the total number of Xs and then find the middle value to find the median. Or, you can count in from each end of the line plot until you get to the middle value.
3. **A.*** You can count the number of Xs that are above the 0, 1, 2, and 3.
   B. 5 students
4. 49 pets
5.* Line plots are like bar graphs because the Xs stack like bars. You can use a line plot to see how many students have each number of pets. They are different because there is no vertical axis so you need to count the Xs to see the value of each "bar".



Represent Data with Line Plots

The students in Mr. Moreno's classroom decided to collect more data about their class to help them get to know one another better. Before they began, Mr. Moreno showed the students how they could use a line plot to represent their data. He explained that line plots were another tool they could use to quickly organize and compare information. Mr. Moreno used the class data table about the number of pets each student has to make a line plot.

Number of Pets

P Number of Pets	N Number of Students
0	4
1	4
2	7
3	2
4	1
5	3
6	1

Pets for Each Student

Number of Pets

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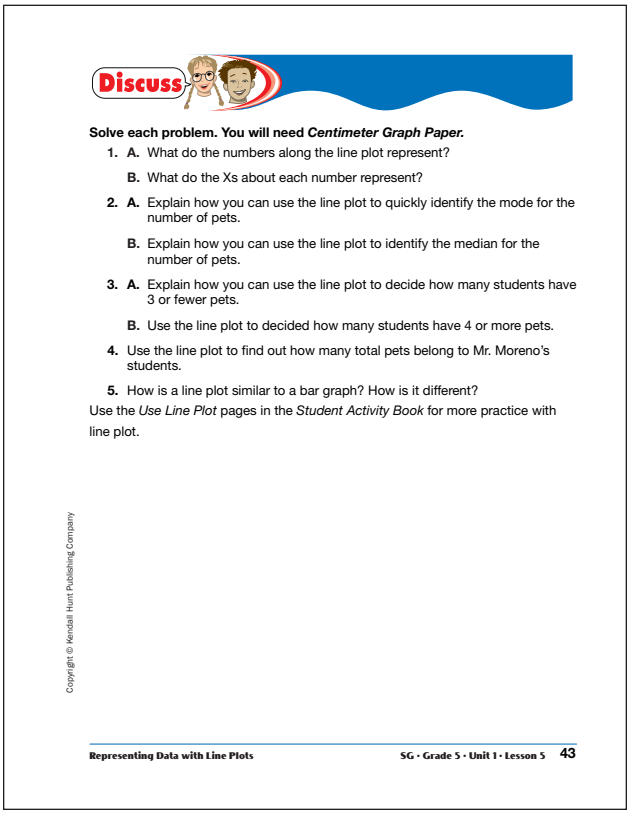

Discuss

Solve each problem. You will need *Centimeter Graph Paper.*

1. **A.** What do the numbers along the line plot represent?
   B. What do the Xs about each number represent?
2. **A.** Explain how you can use the line plot to quickly identify the mode for the number of pets.
   B. Explain how you can use the line plot to identify the median for the number of pets.
3. **A.** Explain how you can use the line plot to decide how many students have 3 or fewer pets.
   B. Use the line plot to decided how many students have 4 or more pets.
4. Use the line plot to find out how many total pets belong to Mr. Moreno's students.
5. How is a line plot similar to a bar graph? How is it different?

Use the *Use Line Plot* pages in the *Student Activity Book* for more practice with line plot.

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*Answers and/or discussion are included in the lesson.

Name _____ Date _____

Use Line Plots

Mr. Moreno wants students to collect data about their classroom. Roberto's group wants to know how far each students lives from school. They organized their information in a table.

Distance from School

Student	Distance From School (miles)
Michael	$\frac{1}{2}$
Irma	$2\frac{1}{2}$
Roberto	$3\frac{1}{2}$
Lee Yah	$2\frac{1}{2}$
Nicholas	$1\frac{1}{2}$
Jessie	2
Nila	$\frac{1}{2}$
Tanya	3
Keenya	$\frac{1}{2}$
Luis	$\frac{1}{2}$
Ana	4
Romesh	3
Grace	1
Frank	3
Linda	$\frac{1}{2}$
Jerome	2
John	1
Shannon	3
Jacob	2
Maya	2
Jackie	1
Ming	4

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Name _____ Date _____

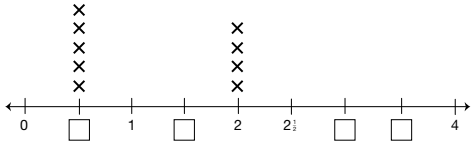
1. Organize the information from Roberto's group to count the number of students who walk each distance. Make a table similar to the one below.

Distance Students Live From School

D Distance from School (miles)	Tallies	*N* Number of Students
$\frac{1}{2}$	𝍸	5
1	𝍸	3

2. Roberto's group started to make a line plot to represent the data they collected. Use the Distance Students Live from School data table you organized to complete the line plot.

Distance Students Live From School



Distance in Miles

3. **A.** What value represents the median number of miles students live from school?

   B. What value represents the mode for the distance students live from school?

   C. Which value, the median or the mode, is a better representation of the data? Explain your thinking.

4. How many students live 2 or fewer miles from school? Show or tell how you know.

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Student Activity Book

Use Line Plots (SAB pp. 11–15)
Questions 1–12

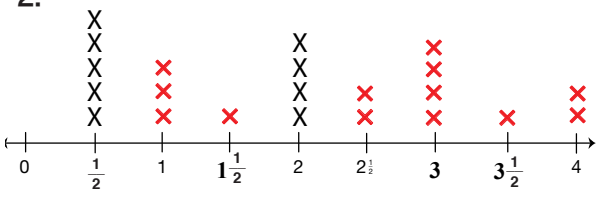
1.

Distance Students Live From School

Distance from School (miles)	Tallies	Number of Students
$\frac{1}{2}$	𝍸	5
1	𝍸	3
$1\frac{1}{2}$	𝍸	1
2	𝍸	4
$2\frac{1}{2}$	𝍸	2
3	𝍸	4
$3\frac{1}{2}$	𝍸	1
4	𝍸	2

2.

Distance Students Live From School



Distance in Miles

3. **A.** 2 miles

   B. $\frac{1}{2}$ mile

   C. Possible response: I think the median is better because most of the students live more than $\frac{1}{2}$ mile from school so that is not typical.

4. 13 students; Possible response: I counted all of the Xs that were above the $\frac{1}{2}$, 1, $1\frac{1}{2}$, and 2 mile distance.

5.*

People in Your Household

Number of People in Your Household	Tallies	Number of Students
0		0
1		0
2	𝍸	2
3	𝍸 |	3
4	𝍸 𝍸 |	6
5	𝍸 𝍸	4
6	𝍸 𝍸 |	5
7		0
8	𝍸	2

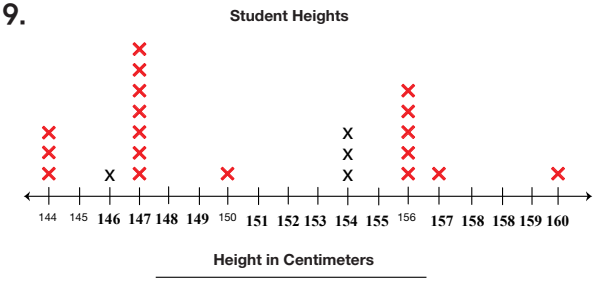
6. Number of People in Your Household and Number of Students

7. 4 people

8. A.* $4\frac{1}{2}$ people

B.* No, it would not be possible to have $\frac{1}{2}$ of a person in a family.

9.



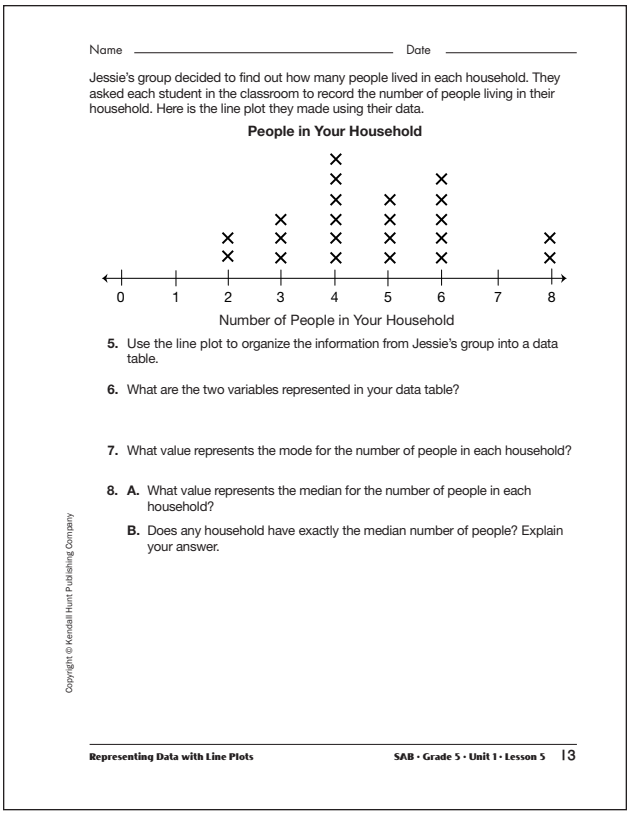
10. Height in Centimeters and Number of Students

11. A. 147 centimeters

B. $148\frac{1}{2}$ centimeters

C. Possible response: I know there are 22 students in the class so I started at 144 centimeters and counted 11 students, then I counted back 11 students starting at 160 centimeters. I found the median would be halfway between 147 centimeters and 150 centimeters.

12. Possible response: I think a new student would be 147 or 148 centimeters tall because that is close to the average height for the classroom.



Name _____ Date _____

Jessie's group decided to find out how many people lived in each household. They asked each student in the classroom to record the number of people living in their household. Here is the line plot they made using their data.

People in Your Household

5. Use the line plot to organize the information from Jessie's group into a data table.

6. What are the two variables represented in your data table?

7. What value represents the mode for the number of people in each household?

8. **A.** What value represents the median for the number of people in each household?

B. Does any household have exactly the median number of people? Explain your answer.

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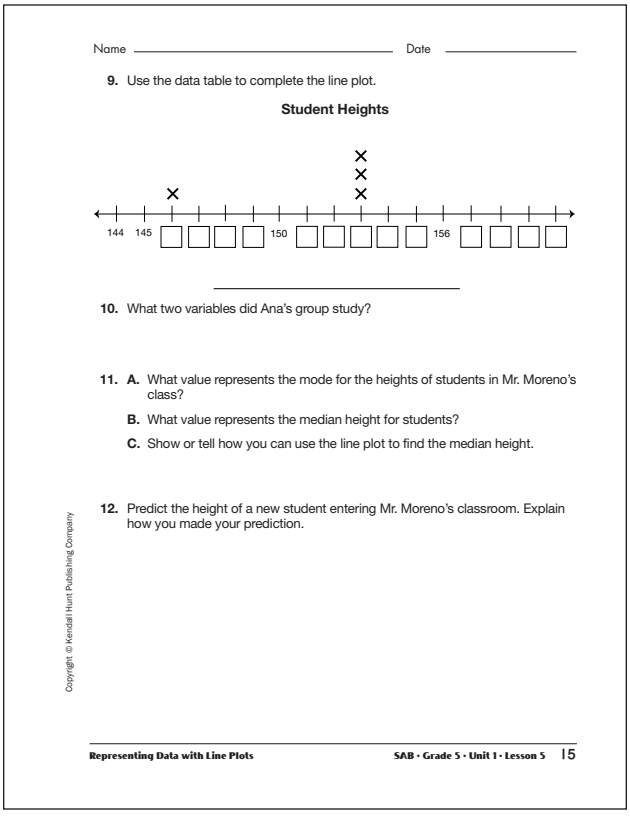

Name _____ Date _____

9. Use the data table to complete the line plot.

Student Heights

10. What two variables did Ana's group study?

11. **A.** What value represents the mode for the heights of students in Mr. Moreno's class?

B. What value represents the median height for students?

C. Show or tell how you can use the line plot to find the median height.

12. Predict the height of a new student entering Mr. Moreno's classroom. Explain how you made your prediction.

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***Answers and/or discussion are included in the lesson.**