

Lesson 12-1

Monday, April 13, 2020 8:57 AM

Name: MB 699

Lesson 12-1 Analyze Line Plots

Several students were asked how many blocks they walk from home to school each day. The results are shown in the line plot below. How many students were asked the question? Use the line plot to solve this problem.

Distance from Home to School

Look Back! **MP.2 Reasoning** What can you tell about the distance most of the students in the group walk to school each day?

Most students walk 4 blocks or less to school.

Handwritten notes:
 Number of Blocks: 1, 2, 3, 4, 5, 6
 Number of Students: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
 Total 25 students



How Can You Analyze Data Displayed in a Line Plot?

A line plot, or dot plot, shows **data** along a number line. Each dot or **X** represents one value in the data set.

In science class, Abby and her classmates performed an experiment in which they used different amounts of vinegar. The table below shows how much vinegar each person used.

Cups of Vinegar	1	1 1/2	2	2 1/2	3
Abby	1	1	1 1/2	2	2
Ben	1 1/2	2	2	2 1/2	2 1/2
Chloe	1	1 1/2	2	2 1/2	2 1/2
David	1	1 1/2	2	2 1/2	3

Read the line plot. A line plot can be used to organize the amount of vinegar each person used.

Analyze the data. Identify any outliers. An **outlier** is any value that is very different from the rest of the values. The dot above 3 is far from the rest of the dots. This value is an outlier.

Convince Me! **MP.2 Reasoning** How does the line plot show which amount of vinegar was used most often in this experiment?

1 cup has the most dots above it which means it was used most often.

Name _____

Guided Practice

Do You Understand?

- Vocabulary** What is an outlier in a set of data?
A value that is very different from the other values.
- In the line plot on the previous page, do any values occur the same number of times? Explain.
Yes 1/2 c. and 1 1/2 c. both have 2 dots above them.
- MP.7 Look for Relationships** Describe any patterns in the line plot on the previous page.
Most dots are between 1/2 c. and 1 1/2 c.

Do You Know How?

In 4 and 5, use the data set to answer the questions.

Mr. Rice's students ran a 40-yard dash in the following times, in seconds.
 6.8 7.3 7.2 7.0 7.2 7.3 7.0 6.9
 6.9 7.1 7.1 7.2 7.1 7.0 7.1 7.2

How many race times are recorded? Use the line plot that shows the data.

Which time occurred most often?
7.1 seconds

Independent Practice

In 6-8, use the line plot to answer the questions.

- How many orders for cheese does the line plot show?
12 orders
- Which amount of cheese was ordered most often?
1/2 lb.
- How many more orders for cheese were for 3/4 pound or less than for 1 pound or more?
9 - 3 = 6; 6 more orders

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Complete
 6, 7, 8, 9,
 11, 12 & 14

Math Practices and Problem Solving

In 9-11, use the data set and line plot.

- MP.6 Be Precise** Jerome studied the feather lengths of some adult fox sparrows. How long are the longest feathers in the data set?
2 3/4 in
- How many feathers are $2\frac{1}{4}$ inches or longer? Explain.
- Higher Order Thinking** Jerome discovered he had made an error when he recorded one of the feather lengths. Which data value could be the error? Explain.
The outlier is 3/4 in. which could be the error. It may have been recorded incorrectly.
- MP.2 Reasoning** How can you find the value that occurs most often by looking at a line plot?
Find the tallest column of dots
- MP.5 Use Appropriate Tools** Draw and label a rectangle with a perimeter of 24 inches.

Common Core Assessment

- Use the information shown in the line plot. How many melons weigh more than 4 pounds and less than 5 pounds?
 (A) 7 melons
 (B) 11 melons
 (C) 13 melons
 (D) 16 melons
4 + 7 = 11 (B)

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