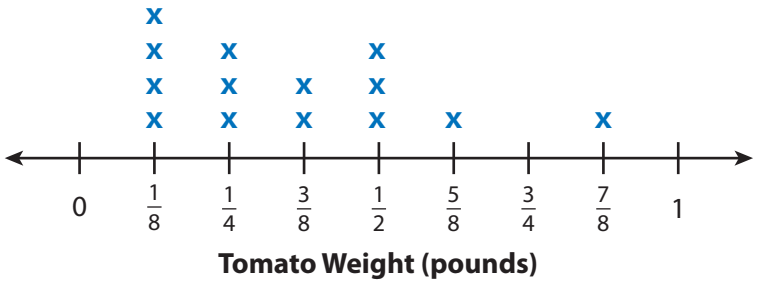
Make Line Plots and Interpret Data

Use What You Know

You have created and used line plots before. Now you will create line plots and use them to answer more complex questions about data. Take a look at this problem.

Tomatoes come in different sizes and types. Mrs. May's class weighed several different tomatoes to the nearest $\frac{1}{8}$ pound. The results are shown in the line plot below. Use the line plot to describe how the weights varied.



a. The greatest number of tomatoes weigh _____ .

b. Which best describes how the weights are spread out? Circle the best description.

clustered between 0 lb and $\frac{1}{2}$ lb	clustered between $\frac{1}{2}$ lb and 1 lb	spread out between 0 lb and 1 1b

c. Are most of the tomatoes on the heavier or lighter end of the scale? _____

d. Are there any tomatoes whose weight is very different from the rest?

If so, what does it weigh? _____

e. What is the difference between the weights of the heaviest and lightest tomato?

_____

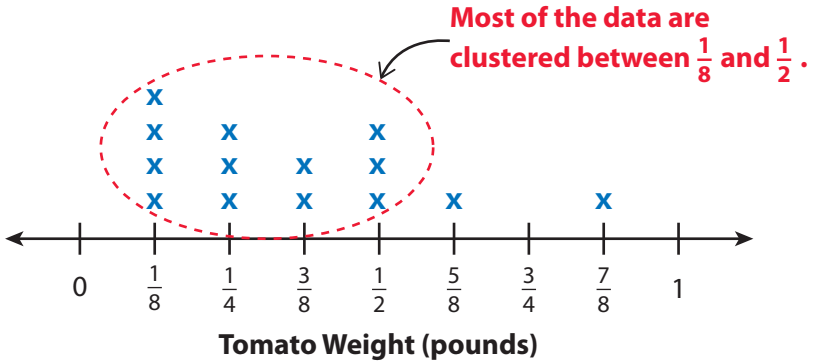
f. How many times the weight of the lightest tomato is the heaviest tomato?

_____

Find Out More

Plotting data on a line plot helps you get a "picture" of what the data look like and how the data are spread out. Each X represents one piece of data. So the taller stacks of Xs mean more data with the same value.

You can use the *Tomato Weight* line plot to talk about the distribution of tomato weights. **Distribution** is how spread out or how clustered the data are.



You can also use operations with data values to come up with ways to describe the data. For example:

- Subtract $\frac{7}{8} - \frac{1}{8}$ to find the difference between the weights of the heaviest and lightest tomato. The difference tells how much the weights vary.
- Divide $\frac{7}{8} \div \frac{1}{8}$ to find that the heaviest tomato is 7 times heavier than the lightest tomato. This gives a comparison between the least and greatest data value.

Reflect

1 Suppose you have one more tomato with a weight of $\frac{3}{4}$ pound. Would that change how much the weights vary? Explain.