

LESSON

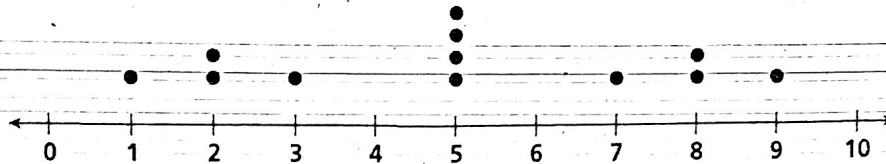


Comparing Data Displayed in Dot Plots

Reteach

A dot plot is a visual way to show the spread of data. A number line is used to show every data point in a set. You can describe a dot plot by examining the center, spread, and shape of the data.

Paula: Goals Scored Per Game This Season

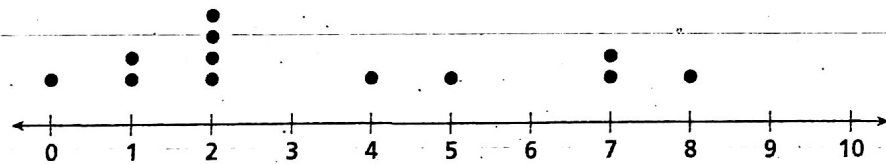


This dot plot shows a symmetric distribution of data. Recall that symmetric means that the two halves are mirror images. In a symmetric distribution, the mean and median are equal.

- The data are symmetric about the center, 5.
- The median has the greatest number of data.
- The mean and the median are both 5.

Some data sets may cluster more to the left or right. The mean and the median for data that are clustered this way are not necessarily equal.

Paula: Goals Scored Per Game Last Season

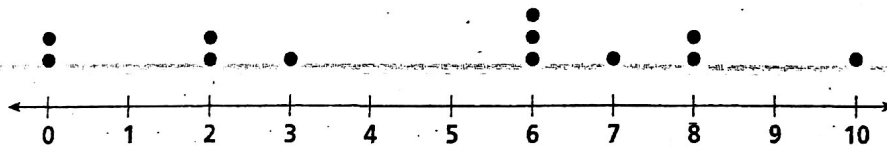


This dot plot shows data that are clustered to the left.

- The data are not symmetric.
- The mean, about 3.4, is more than the median; 2.

Describe the shape of the data distribution for the dot plot.

1. Jaime: Goals Scored Per Game This Season



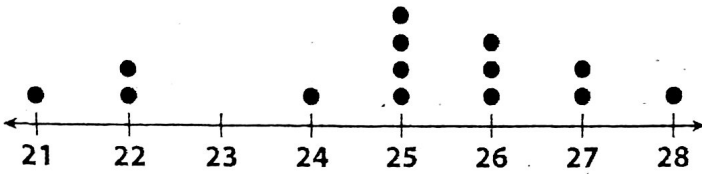
LESSON
11-1

Comparing Data Displayed in Dot Plots

Practice and Problem Solving: A/B

Find the values for each dot plot.

1.

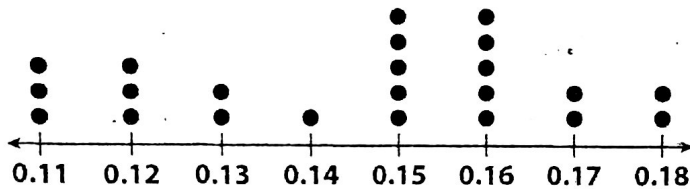


Range: _____

Median: _____

Mode: _____

2.

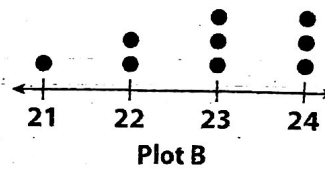
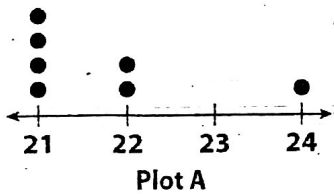


Range: _____

Median: _____

Mode: _____

Compare the dot plots by answering the questions.



3. How do the ranges compare?

4. Compare the number of elements.

5. How do the modes compare?

6. How do the medians compare?

7. Describe the distribution of the dots in each plot.

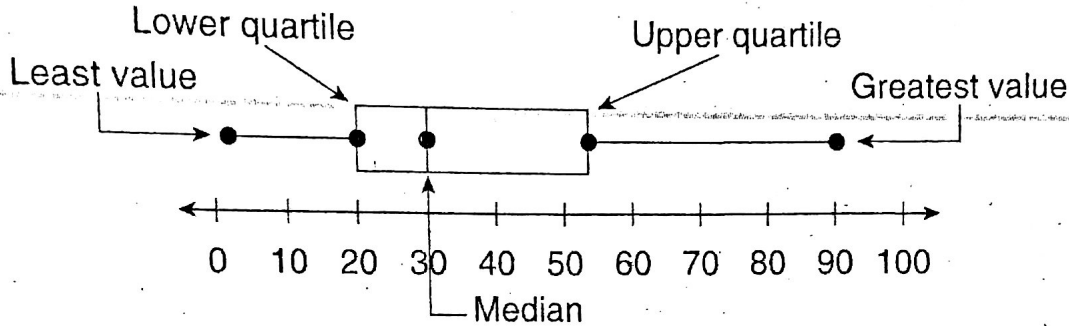
LESSON

11-2

Comparing Data Displayed in Box Plots

Reading Strategies: Use Graphic Aids

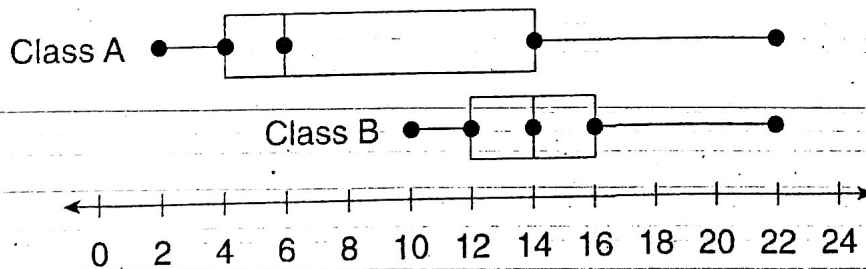
A **box plot** shows a set of data divided into four equal parts called **quartiles**. When you compare box plots, the quartiles are important features that sometimes allow for easier comparisons than central measures.



- The **median** score divides the set of data in half.
- The **box** shows the middle half of the data, or 50 percent of the data, from the lower to the upper quartile.
- The lines, sometimes called "whiskers," extending from the lower and upper quartiles to the least and greatest data point values, identify the rest of the data.
- Twenty-five percent of the data is below the lower quartile, and 25 percent of the data is above the upper quartile.

Answer the questions.

A crafts store offers two different knitting classes. The attendance for each class for 12 sessions is shown.



1. Which class has a greater median attendance? How much greater is it?

2. Which class appears to have a more consistent attendance?

3. Which class has an attendance of less than 14 people 75 percent of the time?

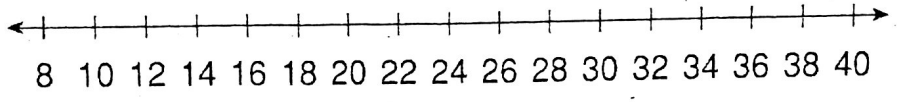
4. What percent of the time does Class B have an attendance greater than 16?

LESSON
11-2

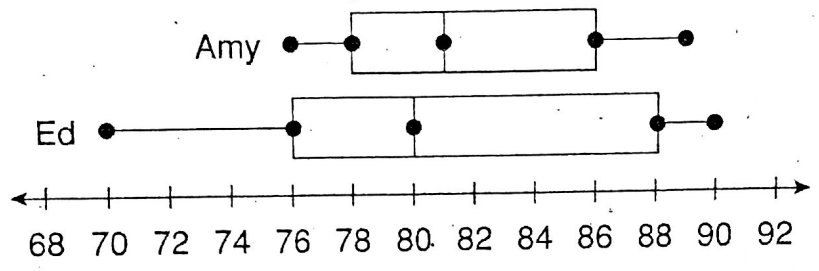
Comparing Data Displayed in Box Plots

Practice and Problem Solving: A/B

1. Use the data to make a box-and-whisker plot. 24, 32, 35, 18, 20, 36, 12

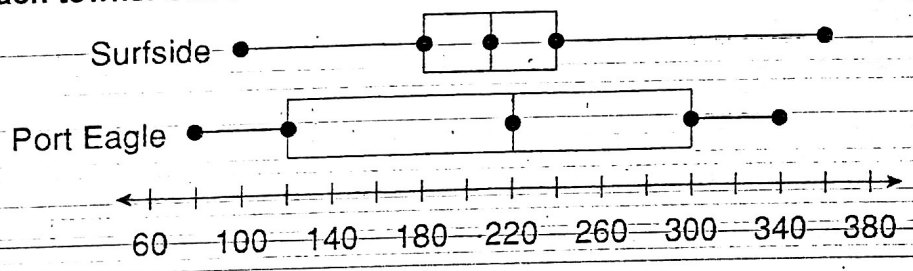


The box-and-whisker plot shows the test scores of two students. Use the box-and-whisker plot for Exercises 2–4.



2. Which student has the greater median test score? _____
3. Which student has the greater interquartile range of test scores? _____
4. Which student has the greater range of test scores? _____
5. Which student appears to have more predictable test scores? Explain your answer.

The box-and-whisker plot shows prices of hotel rooms in two beach towns. Use the box-and-whisker plot for Exercises 6–8.



6. Which town has the greater median room price? _____
7. Which town has the greater interquartile range of room prices? _____
8. Which town appears to have more predictable room prices? Explain your answer.
