

Chapter 12 Lesson 4

Shape of Data Distributions

Vocab:

Distribution – the arrangement of data values

Cluster – data that are grouped closely together

Gap – the numbers that have no data value

Peak – the most frequently occurring values (or mode)

Symmetry – the left side of the distribution looks like the right side

Helpful hint to describe the shape of the data:

You can use clusters, gaps, peaks, and symmetry to help you describe the distribution of the data.

1. Is the distribution symmetric? Yes or No.
2. Are there clusters? Where?
3. Are there any gaps? Where?
4. Are there any peaks? Where?

Examples for shape distribution:

Use clusters, gaps, peaks, outliers, and symmetry to describe the shape of the distribution at the right.

Symmetric? Yes or **No**

Any clusters? Where?

0:01 – 7:30 minutes

Any gaps? Where?

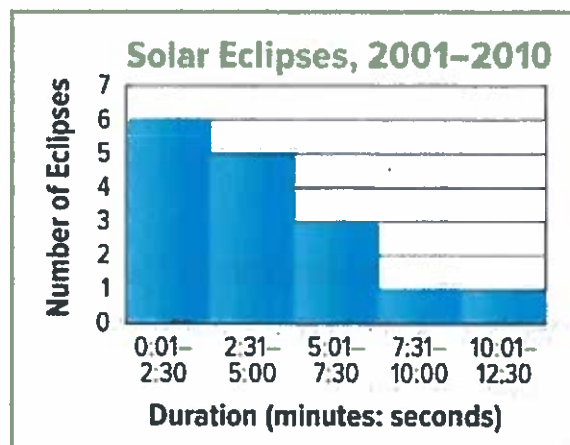
No

Any peaks? Where?

0:01 – 2:30

Describe the shape of distribution:

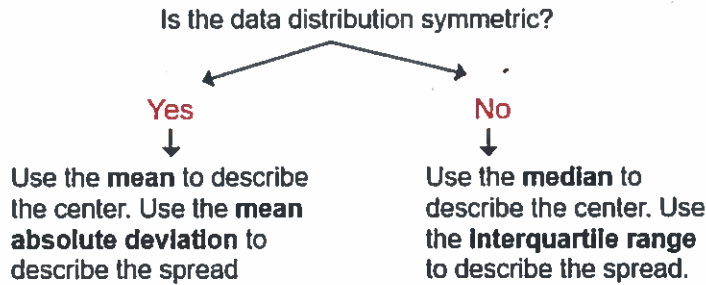
The shape of the distribution is not symmetric. There is a cluster from 0:01 – 7:30 minutes. There are no gaps and there is a peak at 0:01 – 2:30.



How to describe data with measures of center:

Key Concept Measures of Center and Spread

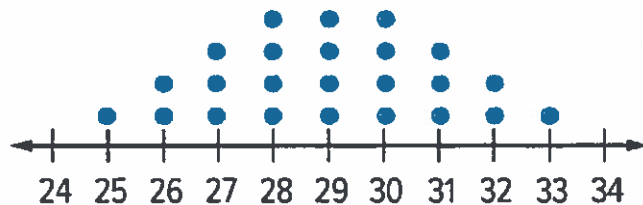
Use the following flow chart to decide which measures of center and spread are most appropriate to describe a data distribution.



Example with measures of center:

Choose the appropriate measures to describe the center and spread of the distribution. Justify your response based on the shape of the distribution. Then describe the center and spread.

Ages of Tennis Players (yr)



Which measure describes the spread:

mean & mean absolute deviation

Justify your answer:

The distribution is symmetric & there are no outliers.

Describe the center and spread:

The center is the mean of 29 years. The spread of the data is about 1.7 years, which is the mean absolute deviation.