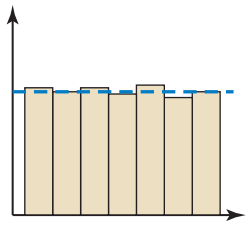
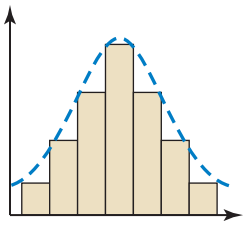
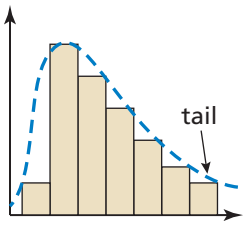
Name _____ Date _____

Histograms

A **histogram** is a bar graph that shows the frequency of data values in intervals of the same size. The height of a bar represents the frequency of the values in the interval. You can use a histogram to identify the shape of a distribution.

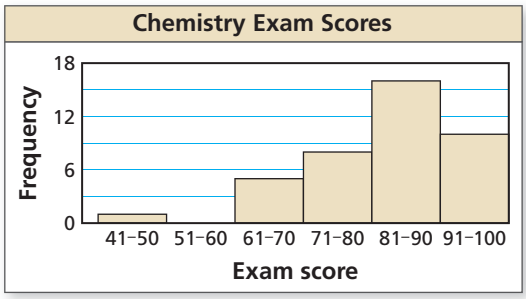
Uniform	Symmetric	Skewed
		
All the bars are about the same height. A uniform distribution is also symmetric	The data on the right of the distribution are approximately a mirror image of the data on the left of the distribution.	The "tail" extends either left or right. A distribution is *skewed left* when most of the data are on the right and *skewed right* when most of the data are on the left.

Example 1 **The frequency table shows the chemistry exam scores for a class. Display the data in a histogram. Describe the distribution.**

Score	41–50	51–60	61–70	71–80	81–90	91–100
Frequency	1	0	5	8	16	10

Draw and label the axes. Then draw a bar to represent the frequency of each interval. There is no space between the bars of a histogram. Be sure to include the interval 51–60 with a frequency of 0. The bar height is 0.

▶ Most of the data are on the right and the tail of the graph extends to the left. So, the distribution is skewed left.



Practice

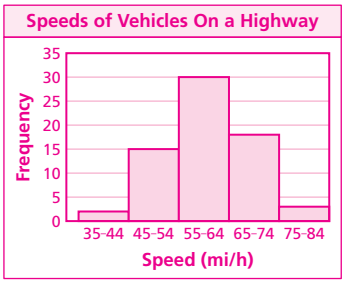
Check your answers at BigIdeasMath.com.

Display the data in a histogram. Describe the distribution.

1.

	Speeds of Vehicles On a Highway				
Speed (mi/h)	35–44	45–54	55–64	65–74	75–84
Frequency	2	15	30	18	3

symmetric



2.

	Ages of People at a Family Picnic				
Age	0–19	20–39	40–59	60–79	80–99
Frequency	10	14	9	6	3

skewed right