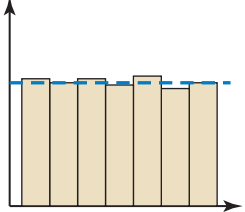
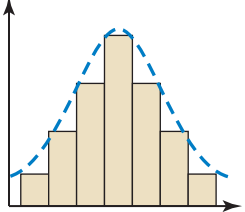
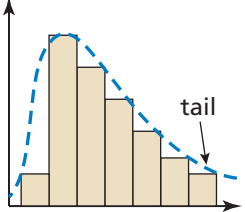


# Histograms

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.

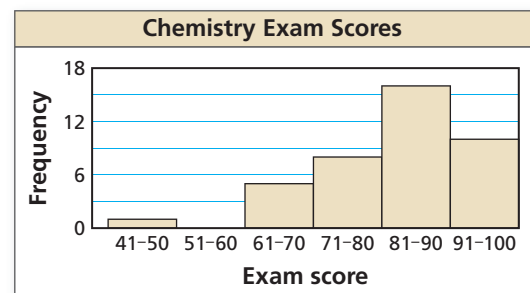
Uniform	Symmetric	Skewed
 <p>All the bars are about the same height. A uniform distribution is also symmetric</p>	 <p>The data on the right of the distribution are approximately a mirror image of the data on the left of the distribution.</p>	 <p>The “tail” extends either left or right. A distribution is <i>skewed left</i> when most of the data are on the right and <i>skewed right</i> when most of the data are on the left.</p>

**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](http://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

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