

**Lesson 12-4**

**Example 1 Draw a Histogram**

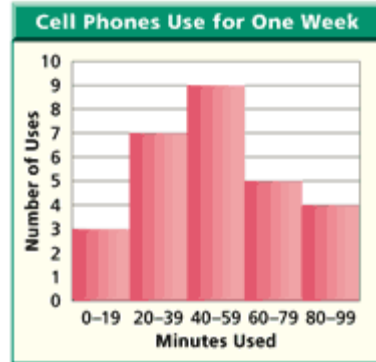
**CELL PHONES** The frequency table shows the number of minutes used on a cell phone during a one week period. Display the data in a histogram.

Cell Phone Use for One Week		
Minutes	Tally	Frequency
0-19		3
20-39		7
40-59		9
60-79		5
80-99		4

**Step 1** Draw and label a horizontal and vertical axis. Include the title.

**Step 2** Show the intervals from the frequency table on the horizontal axis and an interval of 1 on the vertical axis.

**Step 3** For each interval of minutes, draw a bar whose height is given by the frequency.



**Example 2 Interpret Data**

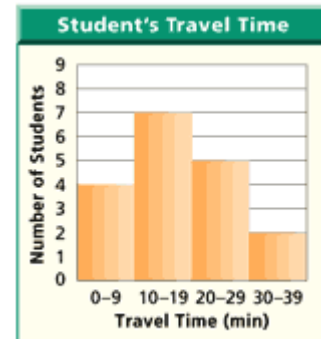
**SCHOOL TRAVEL** Refer to the histogram at the right.

**a. How many students travel for at least 20 minutes to get to school?**

Since there are 5 students in the 20-29 interval and 2 students in the 30-39 interval,  $5 + 2$  or 7 students travel for at least 20 minutes to get to school.

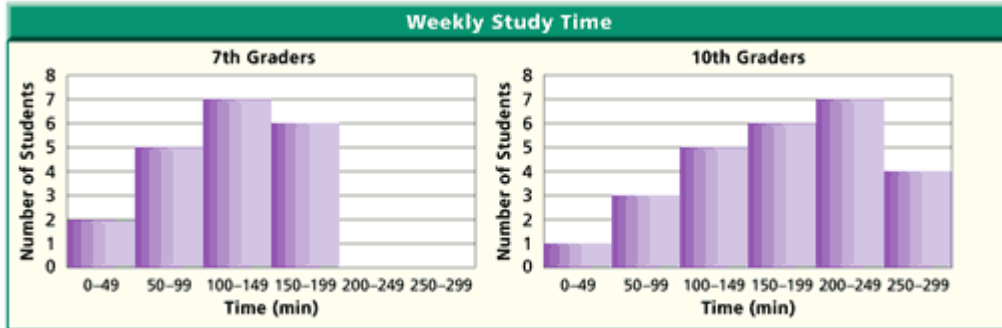
**b. Is it possible to tell the travel time of the student having the longest travel time from the histogram?**

No, it is only possible to tell that the travel time is between 30 and 39 minutes.



### Example 3 Compare Two Sets of Data

**STUDY TIME** The histograms below show the amount of time spent studying each week for 7<sup>th</sup> graders and 10<sup>th</sup> graders. Use the histograms to answer the question below.



**Which grade has more students studying 150 minutes or more?**

The 10<sup>th</sup> grade has  $6 + 7 + 4$  or 17 students studying 150 minutes or more, while the 7<sup>th</sup> grade only has 6.