

Making Bar and Line Graphs

- One way to organize data is by using a frequency table. In a **frequency table**, you use **tally marks** to record and display the frequency of events.

Example 1 Make a frequency table to organize the temperature data in the chart at the right.

- Step 1** Make a table with three columns: Temperature, Tally, and Frequency. Add a title.
- Step 2** Use intervals to organize the temperatures. In this case, we are using intervals of 10.
- Step 3** Use tally marks to record the temperatures in each interval.
- Step 4** Count the tally marks in each row and record in the Frequency column.

Noon Temperature (°F)					
52	48	60	39	55	56
60	63	70	58	59	54
63	65	66	73	76	51
54	60	52	48	47	54

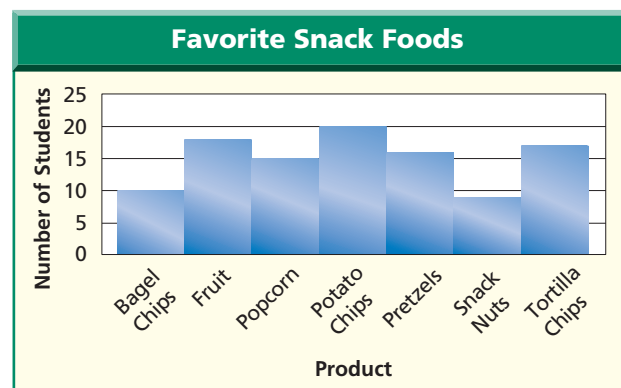
Noon Temperature (°F)		
Temperature	Tally	Frequency
30–39	I	1
40–49	III	3
50–59	IIII III	10
60–69	IIII II	7
70–79	III	3

- A **bar graph** compares different categories of data by showing each as a bar whose length is related to the frequency.

Example 2 The table below shows the results of a survey of students' favorite snacks. Make a bar graph to display the data.

Product	Number of Students
Bagel Chips	10
Fruit	18
Popcorn	15
Potato Chips	20
Pretzels	16
Snack Nuts	9
Tortilla Chips	17

- Step 1** Draw a horizontal axis and a vertical axis. Label the axes as shown. Add a title.
- Step 2** Draw a bar to represent each category. The vertical scale is the number of students who chose each snack. The horizontal scale identifies the snack chosen.



- Another way to represent data is by using a **line graph**. A line graph usually shows how data changes over a period of time.

Example 3 Sales at the Marshall High School Store are shown in the table below. Make a line graph of the data.

School Store Sales Amounts			
September	\$670	February	\$388
October	\$229	March	\$412
November	\$300	April	\$309
December	\$168	May	\$198
January	\$290		

- Step 1** Draw a horizontal axis and a vertical axis and label them as shown. Include a title.
- Step 2** Plot the points to represent the data.
- Step 3** Draw a line connecting each pair of consecutive points.

