**Lesson 10-3**

**Example 1 Display Data in a Circle Graph**
SPORTS In a recent survey, college students were asked to choose the sport they consider their favorite to watch on television. The results are shown in the table at the right. Make a circle graph of the data in the table.

Favorite Sport	Percent
Baseball	32%
Football	26%
Basketball	22%
Other	20%

- Find the degrees for each part. Round to the nearest whole degree.
  32% of 360° = 0.32 · 360° or about 115°
  26% of 360° = 0.26 · 360° or about 94°
  22% of 360° = 0.22 · 360° or about 79°
  20% of 360° = 0.20 · 360° or 72°
- Use a compass to draw a circle with a radius as shown. Then use a protractor to draw the first angle, in this case 115°. Repeat this step for each section.
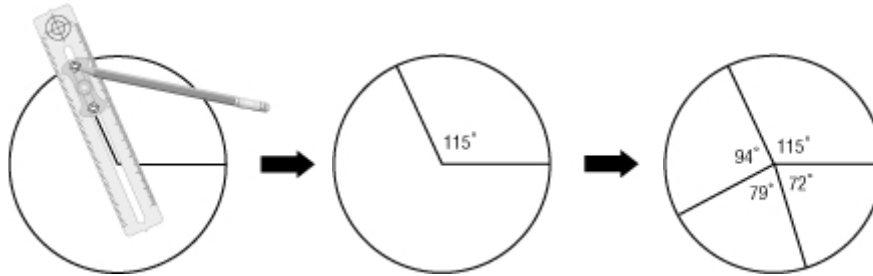
- Label each section of the graph with the category and percent. Give the graph a
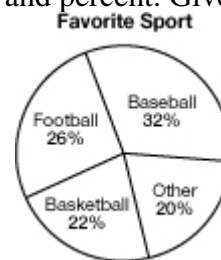
title.

Check To draw an accurate circle graph, make sure the sum of the angle measures
equals 360º.

Example 2 Construct a Circle Graph
CHOCOLATE CANDIES The table shows the number of each color of chocolate candies in one bag of the candy. Make a circle graph of the data.

| Color	Number
Brown	24
Red	20
Yellow	16
Green	10

- Find the total number of candies: 24 + 20 + 16 + 10 or 70.

- Find the ratio that compares each number with the total. Write the ratio as a decimal rounded to the nearest hundredth.

  brown: $\dfrac{24}{70} \approx 0.34$ red: $\dfrac{20}{70} \approx 0.29$ yellow: $\dfrac{16}{70} \approx 0.23$ green: $\dfrac{10}{70} \approx 0.14$

- Find the number of degrees for each section of the graph.

  brown: $0.34 \cdot 360° \approx 122°$
  red: $0.29 \cdot 360° \approx 104°$
  yellow: $0.23 \cdot 360° \approx 83°$
 green: $0.14 \cdot 360° \approx 50°$

Color of Chocolate Candies
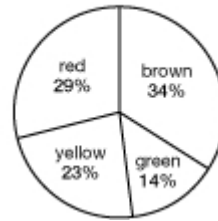
- Draw the circle graph.

Example 3 Analyze a Circle Graph
UNIFORMS The circle graph shows the percent of middle school students who favor, oppose, or don't know how they feel about students being required to wear uniforms to school. Use the graph to describe the opinion of most middle school students.

Students Should be Required
to Wear Uniforms to School
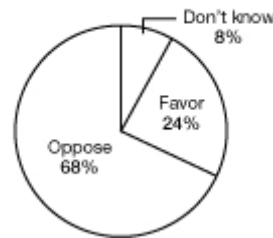
The greatest percent of the circle graph is the section representing the "Oppose" response. So, most middle school students do not favor being required to wear uniforms to school.

Example 4 Analyze a Circle Graph
UNIFORMS If 500 middle school students were surveyed to obtain the data used to create the circle graph in Example 3, how many of those students favored students being required to wear uniforms to school?

24% of the 500 students favored being required to wear uniforms to school.
24% of 500 = 0.24 · 500
$\qquad\quad$ = 120
So, 120 students responded in favor of school uniforms.