

## 7-2 Circle Graphs - Practice and Problem Solving

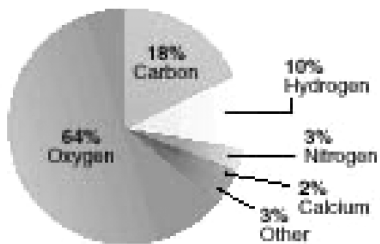
5. **ELECTIONS** The table shows the results of an election for class president. Sketch a circle graph to display the data.

Class President Ballots	
Melissa	31%
Lacey	25%
Troy	25%
Omar	19%

We need to divide a circle into 3 sectors, representing 31%, 25%, 25%, and 19% of the total area. The 25% sectors are each exactly one quarter of the circle, so these are easiest to draw. The 19% sector is slightly smaller than one-quarter of the circle and the 31% sector is slightly larger than one-quarter.

**INTERNET** Use the graph that shows the elements found in the human body.

Elements in the Human Body



7. Which element makes up the greatest percent of the body?

Looking at the graph, oxygen is the largest section.

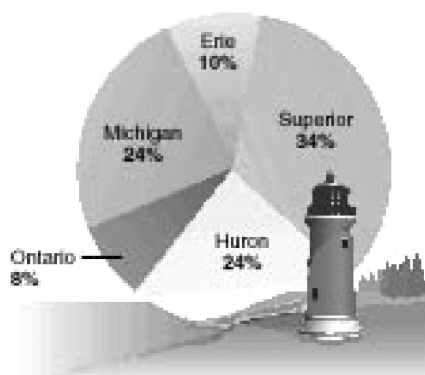
9. What can you determine about the amount of oxygen and carbon in the human body?

Add the two percents together to find their total.

$$64\% + 18\% = 82\%$$

**LAKES** Use the graph that shows the approximate portion of the entire Great Lakes each lake covers.

The Great Lakes



Name: School: Grade: Class:

11. What percent of the entire Great Lakes are the two smallest lakes?

Ontario and Erie are the two smallest lakes, so just add their percentages together.

$$10\% + 8\% = 18\%$$

13. How does the number of students that walk to school compare to the number of students that ride the school bus?

Transportation to School	
Mode of Transportation	Percent
school bus	54
walk	27
bike	9.5
carpool	9.5

You can divide the two percentages to find how they compare.

$$27 \div 54 = \frac{1}{2}$$

15. **COLLECT THE DATA** Record your activities for one 24-hour period. Sketch a circle graph to display your data. Then write a few sentences that analyze the data.

See students' work

17. **SELECT A TECHNIQUE** Carter wants to sketch a circle graph of the data in the table. Which of the following techniques might Carter use to determine how big to make each section of the circle graph? Justify your selection(s). Then use the technique(s) to sketch the circle graph.

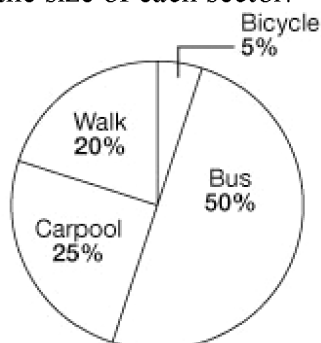
How Students Travel to Clint Middle School	
bicycle	5%
bus	47%
carpool	25%
walk	22%

mental math

number sense

estimation

Sample answer: Estimation; since he is sketching the circle graph he does not need exact percents for the size of each sector.



Name: School: Grade: Class:

19. A group of adults were asked to give a reason why they honor their moms. Fifty percent of the adults said “She survived raising me,” 22% said “she was a great role model,” 19% said “she has become my best friend,” and 9% said “she always had dinner on the table and clean clothes in the closet.” Which circle graph best displays the data?

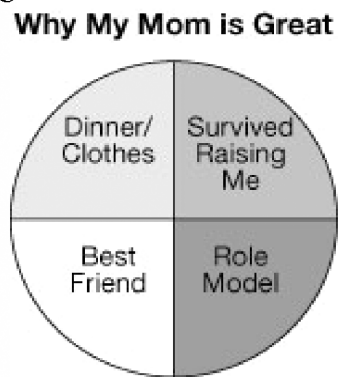
A



B



C



D

“Survived raising me”, with 50%, should take up exactly half of the circle. This eliminates choices B and C. Of the remaining sectors, “Dinner/Clothes” should be the smallest. So, Graph A is correct.

**Write each fraction or mixed number as a percent.**

Name: School: Grade: Class:

21.  $\frac{9}{10}$

$$\begin{aligned}\frac{9}{10} &= \frac{9 \times 10}{10 \times 10} \\ &= \frac{90}{100} \\ &= 90\%\end{aligned}$$

**MOVIES** Use the following information.

A video store charges \$3 to rent a DVD.

23. Write an equation to represent the total cost  $c$  for renting  $d$  DVDs.

Multiply the number of DVDs rented by 3.

$$c = 3d$$

25. Order 3.8, 3.05, 0.39, and 3.5 from greatest to least.

First, compare the ones places. All the numbers have 3 in the ones place except 0.39, which has a 0. Since  $0 < 3$ , 0.39 is least.

For the other three numbers, compare the tenths places. Here,  $8 > 5 > 0$ , so  $3.8 > 3.5 > 3.05$ .

So, the numbers in order from greatest to least are

3.8, 3.5, 3.05, 0.39.

**PREREQUISITE SKILL** Write each fraction as a decimal.

27.  $\frac{1}{8}$

$$\begin{array}{r} \frac{1}{8} \\ 8 \overline{) 1.000} \\ \underline{-8} \phantom{00} \\ 20 \phantom{0} \\ \underline{-16} \phantom{0} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

29.  $\frac{1}{5}$

$$\begin{array}{r} \frac{1}{5} \\ 5 \overline{) 1.0} \\ \underline{-10} \\ 0 \end{array}$$