



Circle Graphs

Goal: Interpret circle graphs and make predictions.



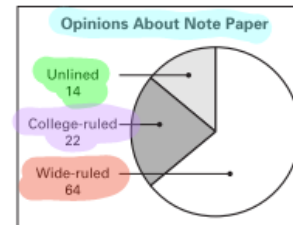
Vocabulary

Circle graph:

EXAMPLE 1 Interpreting a Circle Graph

Paper A group of students are asked what kind of paper they use when taking notes in class. Their answers are shown in the circle graph.

- How many students prefer using wide-ruled paper?
- How many students do not use wide-ruled paper?



Solution

- To find out how many students prefer using wide-ruled paper, find the data value in the section labeled **wide-ruled**.

Answer: The number who prefer using wide-ruled paper is **64**.

- To find out how many students do not prefer using wide-ruled paper, add the values in the **unlined** and **college-ruled** sections:

$$14 + 22 = 36$$

Answer: The number who do not prefer using wide-ruled paper is **36**.

Your turn now In Exercises 1–3, use the circle graph that shows how many teenagers out of 100 prefer using a bike, a scooter, a skateboard, or in-line skates.

1. Which item is most popular?

Bike

2. How many teenagers do not prefer skateboards?

86 teens

3. Is it reasonable to say that the scooter is the least popular choice? Explain.

yes b/c 7 is the smallest.



$$\begin{array}{r} 910 \\ +100 \\ -14 \\ \hline 86 \end{array}$$

EXAMPLE 2 Using a Graph

Writing down key facts as you read a problem can help you solve it. In Example 2, you know: 100 students were surveyed, 48 of them like skiing, and 200 people are in the group you're predicting for.

Winter Sports The circle graph shows the favorite winter sport of 100 students. Predict how many students out of 200 you would expect to respond "Skiing."

Solution

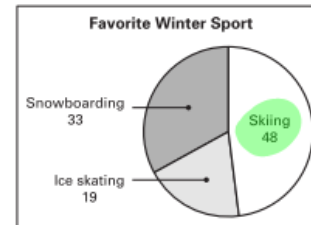
Find the relationship between the number of students surveyed and the number of students in the group you're making a prediction for:

$$100 \times 2 = 200$$

Multiply the number of students who prefer skiing by 2 to predict the number of students out of the group of 200 that will respond "Skiing":

$$48 \times 2 = 96$$

Answer: About 96 students in a group of 200 should respond "Skiing."



Your turn now Use the circle graph in Example 2.

4. Predict the number of students out of 500 you would expect to respond "Snowboarding."

$$\begin{array}{r} 33 \overline{) 100} \\ \times 5 \\ \hline 165 \end{array}$$

$$\begin{array}{r} 33 \\ \times 5 \\ \hline \end{array}$$

165 students