

Student Task	Work with percentages to create and interpret favorite sports information in circle graphs. Communicate mathematical understanding of percentages.
Core Idea 1 Number and Operation	<p>Understand number systems, the meanings of operations, and ways of representing numbers, relationships, and number systems.</p> <ul style="list-style-type: none"> • Work flexibly with fractions, decimals, and percents to solve problems
Core Idea 5 Data Analysis	<p>Students deepen their understanding of statistical methods used to display, analyze, compare and interpret data sets.</p> <ul style="list-style-type: none"> • Represent and analyze data in the form of graphs including circle graphs • Discuss and understand the correspondence between data sets and their graphical representations
Core Idea 2 Mathematical Reasoning	<p>Employ forms of mathematical reasoning and justification appropriately to the solution of a problem.</p> <ul style="list-style-type: none"> • Extract pertinent information from situations and determine what additional information is needed • Invoke problem-solving strategies • Verify and interpret results of a problem • Use mathematical language to make complex situations easier to understand

Sports

This problem gives you the chance to:

- work with percentages
 - use circle graphs
-

In a survey in Lake City, girls in the 8th grade were asked their favorite sport.

The results are shown in this table.

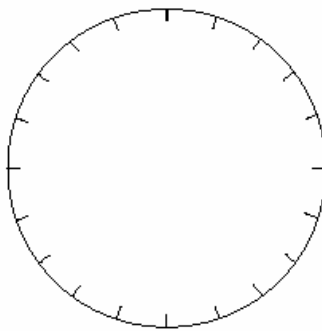
SPORT	GIRLS	PERCENTAGE
Soccer	78	
Basketball	117	
Tennis	65	



1. Find the percentage of girls who preferred each of the sports.
Write your answers in the table.

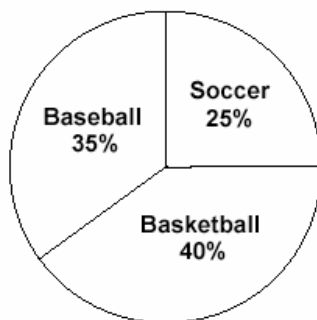
Show your calculations.

2. Use the percentages in the table to complete this circle graph.
Do not forget to label each sector.



In Lake City, boys in the 8th grade were also surveyed.
The results of this survey are shown in the circle graph below.

3. Seventy boys liked basketball best.
How many boys were there in the 8th grade survey? _____
Show your calculations.



The 8th grade baseball teams from Lake City and Appleton plan to play a game.

Luis has seen a survey of Appleton's 8th grade boys' favorite sports. The survey shows that 45% of them like baseball best.

Luis says that this will not be fair because more boys in Appleton like baseball best, so there will be more boys to choose from for the team.

Kyle says he thinks Luis is wrong.

4. Explain why Luis might be wrong in thinking that more boys prefer baseball in Appleton than in Lake City.

Sports	Rubric	
<p>The core elements of performance required by this task are:</p> <ul style="list-style-type: none"> • work with percentages • use circle graphs <p>Based on these, credit for specific aspects of performance should be assigned as follows</p>	points	section points
<p>1. Gives three correct percentages: 30, 45, 25</p> <p>Partial credit 1 value correct and total 100% or 2 values correct</p> <p>Shows a correct method for at least one calculation such as: $78/260 \times 100$</p>	<p>2</p> <p>(1) (1)</p> <p>1</p>	<p>3</p>
<p>2. Draws and labels one sector correctly.</p> <p>Draws and labels the other two sectors correctly.</p>	<p>1ft</p> <p>1ft</p>	<p>2</p>
<p>3. Gives a correct answer: 180</p> <p>Shows correct work such as: $72/40 \times 100$</p>	<p>1</p> <p>1</p>	<p>2</p>
<p>4. Gives a correct explanation such as: We only know about the percentages, not the actual numbers. or There might be fewer 8th grade boys in Appleton than in Lake City.</p>	<p>1</p>	<p>1</p>
Total Points		8