

Lesson 5-9

Problem

RECREATION A recent poll surveyed students about their favorite form of outdoor activity. Of the 660 students surveyed, 303 said playing sports, 132 chose camping, 88 said going to the park, 73 picked hiking, and 64 said fishing. Make a circle graph of the data.

Solve the Problem

Step 1 Write each response as a percent of the entire survey, 660.

Sports	$303 \div 660 \square 46\%$
Camping	$132 \div 660 \square 20\%$
Park	$88 \div 660 \square 13\%$
Hiking	$73 \div 660 \square 11\%$
Fishing	$64 \div 660 \square 10\%$

Step 2 Find the number of degrees in the central angle by multiplying by 360° .

$0.46 \cdot 360^\circ \square 166^\circ$
$0.2 \cdot 360^\circ \square 72^\circ$
$0.13 \cdot 360^\circ \square 47^\circ$
$0.11 \cdot 360^\circ \square 40^\circ$
$0.1 \cdot 360^\circ \square 36^\circ$

Step 3 Draw a circle with a compass. To construct the central angles for the sectors, draw any radius. Place a protractor along the radius with 0 at the circle's center. Measure and mark 166° . Draw another radius from the center to this point.

Step 4 Place the protractor along the new radius. Measure and mark 72° . Draw another radius to this point. Draw the rest of the central angles this way. Label each sector and title the graph.

