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Circle Graphs

Notes	Video Links & Practice Space
Vocabulary **Circle Graph:** a visual _____ of categorical data; the whole set of data is represented by the circle and its _____; the categories are represented by _____ parts of the circle; also called a pie chart **Categorical Data:** a type of data that is _____ into groups; categorical data are qualitative **Central Angle:** an angle that has its _____ at the center of a circle with radii as its sides **Proportional Reasoning:** the ability to think about and _____ multiplicative relationships between quantities	**Vocabulary (1:06)**

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Understanding Circle Graphs

Four friends split a large pizza with each having an equal portion. What fraction of the pizza did each friend have?

The entire pizza represents 1 whole. If each friend had an equal portion, then each friend had _____of the total pizza. $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1$

What percentage of the pizza did each friend have? To convert a fraction to a percent, we _____ the numerator by the denominator and multiply by _____.

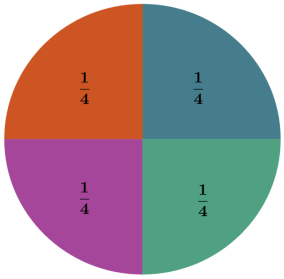
$\frac{1}{4} = 1 \div 4 = \qquad \cdot 100 = 25\%$

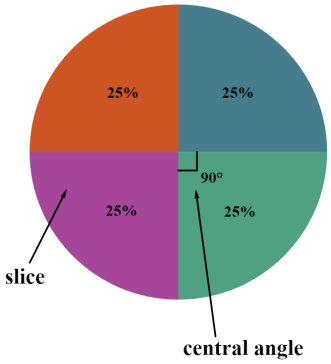
$25\% + 25\% + 25\% + 25\% = 100\%$

The sum of the interior angles of a circle equals _____ degrees, so if there are four equal parts then each one equals 90 degrees. Each slice of the pizza has a central _____ of 90 degrees.

$90 + 90 + 90 + 90 = 360$

Understanding Circle Graphs (2:12)





Finding Central Angles and Percentages

$$\frac{Amount\ in\ category}{Total\ sum\ of\ data\ set} \cdot 360 = Central\ Angle$$

$$\frac{Amount\ in\ category}{Total\ sum\ of\ data\ set} \cdot 100 = Percentage$$

Key Facts for a Circle graph: the central angles must add up to 360 degrees and percentages must add to 100 percent.

Table below shows the favorite core subjects for 9th grade students at the local high school.

Math	English	History	Science
30	9	51	60

Calculate the central angle and percent for English?

Central Angles/Percentages (3:19)

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Practice

1. Table below shows the favorite core subjects for 9th grade students at the local highschool.

Math	English	History	Science
30	9	51	60

Calculate the four central angles and percentages for the circle graph.

Practice (4:58)

Steps for Creating a Circle Graph

1. Add all the values in the data set to get the total sum
2. Find the central angles for each slice
3. Find the percentage for each slice
4. Title the graph and sure each slice is label with category and percentage

Table below shows the favorite colors for kindergarten students in Miss Smith's Class

red	blue	green	pink	yellow
2	4	5	6	3

Create a circle graph with the data given.

Steps (9:44)

Practice

2. Table below shows the favorite lunch items in the cafeteria during a 5th grade survey.

Mac-n-cheese	Pizza	Chicken nuggets	Sandwich
18	30	9	3

Using the table above create a circle graph.

Practice (5:17)

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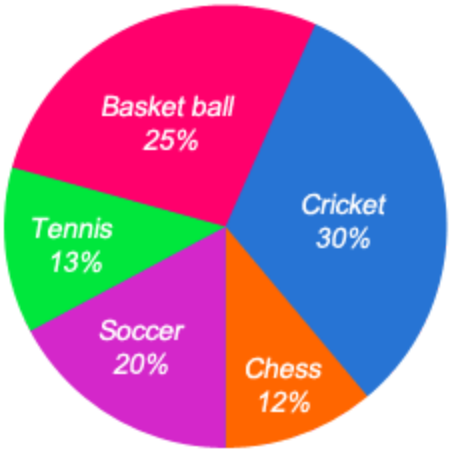
Interpreting Circle Graphs

400 students were surveyed about their favorite sports



How many students prefer Soccer?

How many students preferred chess or basketball?

What is the central angle for Cricket?

Interpreting circle graphs (5:19)