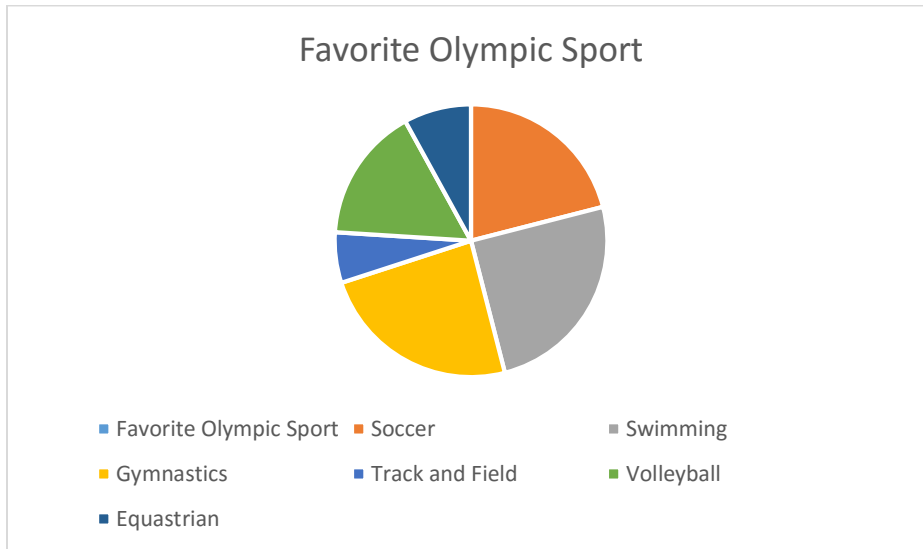


Categorical/Qualitative Data

Building a Pie Chart

Pie Chart: a pie chart shows percent. A percent is always out of 100. A percent is also the same thing as a decimal and a fraction. See how in my example each section is color coded and the pie chart has a title and a key.



Things you need to know before you make a pie chart:

- Pie charts always show a percent. A percent is always out of 100.
- A percent is another way to write a fraction or decimal.
- A circle is made up of angles. An angle is two rays meeting at the same endpoint <.
- A complete circle measures 360 degrees.

To make a pie chart the first thing we are going to do is write our data as fractions. For each types of data collected you will write the number collected as the numerator and the total people you asked the survey to as the denominator. This means your denominator will be the same for each fraction.

Example: I asked 20 people if they liked chocolate or vanilla. 17 said chocolate and 3 said vanilla. So the fraction of people that like chocolate would be $\frac{17}{20}$ and the fraction of people that like vanilla would be $\frac{3}{20}$

Category	Fraction

Categorical/Qualitative Data

Building a Pie Chart

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Your next step is to make an equivalent fraction that has the denominator of 360. This is because a complete circle is equal to 360 degrees. Remember to make an equivalent fraction you will need to multiply the numerator and the denominator by the same number.

Example

$$\frac{17}{20} \times \frac{18}{18} = \frac{306}{360} \quad \text{or} \quad \frac{3}{20} \times \frac{18}{18} = \frac{54}{360}$$

When you are done you should be able to add all of your fractions together and get $\frac{360}{360}$

$$\frac{306}{360} + \frac{54}{360} = \frac{360}{360}$$

Original Fraction	Work	Equivalent Fraction

Sum of equivalent fractions:

$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \frac{\hspace{1cm}}{360}$$

Your last step is to use a protractor to draw your angles. Draw a base line and from there measure the numerator of your first category. Draw a line. From that line measure the numerator of your next category, draw a line. This process will continue until you have measured all the angles. Use a compass to draw a neat circle around all of your angles. Color code it and draw a key. You are finished!

Categorical/Qualitative Data

Building a Pie Chart

Rubric

Student(s): _____ Grader: _____

Component	0 Points	5 Points	10 Points	Score
Project Completion	Nothing is filled out and no graphs are presented	The paper is filled out.	The paper is filled out and graphs are turned in.	
Math	None of the calculations are correct.	Most of the calculations are correct but work is not shown.	All of the calculations are correct and work is neat and shown.	
Graphs	The graph is missing titles, and/or key. The graph is not accurate.	The graph has titles and a key and is mostly accurate.	The graph is perfect nothing is missing. It is accurate, neat, and colorful	
Neatness	The handwriting was very sloppy and difficult to read.	Most of the work is illegible but some of it is sloppy. For example, there are not complete sentences or proper punctuation.	The work is very neat. All punctuation is in place. The graphs are creative and colorful.	
Total				