

Creating a Circle Graph with a Protractor Activity

Goal: To create a Circle Graph, using a protractor, to analyze percentage data.

Materials

- Long Piece of Paper
- Colored Pencils
- Protractor
- Colored Markers
- Pencil
- Calculator

Procedure

- Choose a topic you could poll your classmates about. Be sure your topic contains between 4 and 6 categories. Examples: favorite type of music; favorite type of movie; favorite type of restaurant, the number of hours of sleep they got last night; type of pets, and so on.
- Create a Line Plot or a Tally Sheet, containing your categories, to keep track of your data as you poll your classmates. You can always add a categories as needed.
- Go around the classroom, gathering your data.
- After you have collected all your data, create a table with four columns and enough rows for each category, as well as a row for the column labels and a bottom row for the totals.
- Label the columns as follows: Categories; Frequency; Percentage (%); Angle (°).
- Fill in the category column and the frequency column (number of students).
- Calculate the percentage for each category by dividing frequency by the total number of students polled. Write your percentages on the table. Remember to check your work by adding up the total category percentages. The total should equal 100.
- Calculate the angles by multiplying 360 by the percentages for each category. Check your work by adding up the category angles. The total should equal 360.
- Use your protractor to create a circle on the long piece of paper. (Suggestion: use a pencil and go over it later with a colored marker).
- Use your protractor to create your sector categories, based on your calculated angles. (Again, use a pencil and go over it later with a marker).
- Create a color key for your circle graph.
- Color in your circle graph, give it a descriptive title, and write in the percentages in each category sector using a marker.
- Make sure your name is on your completed circle graph.
- Use painter's tape to add your circle graph to the hallway wall and turn in this sheet.

Rubric

Task	Points
Circle is drawn accurately and neatly	15
Category sectors are accurately drawn.	15
Visible Key	15
%'s are included on the graph	15
Visible, Descriptive Title	15
Neat Handwriting	10
Graph is colorful	10
Graph creator's name is visible	5