

# Mathematics LBS 5

## Spreadsheet Mathematics: Statistics and Graphing

### Lab 5: Interpreting Pie Charts or Circle Graphs



*Microsoft Excel Logo and all screens captured by permission of Microsoft*

**Goal** To interpret pie charts or circle graphs

**Learning Outcomes** After completing this section, the student should be able to

- use the Internet to look up information on pie charts or circle graphs
- answer questions based on data illustrated by pie charts or circle graphs
- complete practice assignments

**Prior Learning** Before attempting this lab, it is expected that the student has

- completed **Spreadsheet Mathematics Lab 1: Entering, Formatting and Saving data in an Excel Spreadsheet**
- completed **Spreadsheet Mathematics Lab 4: Constructing Pie Charts or Circle Graphs**

### **Contents**

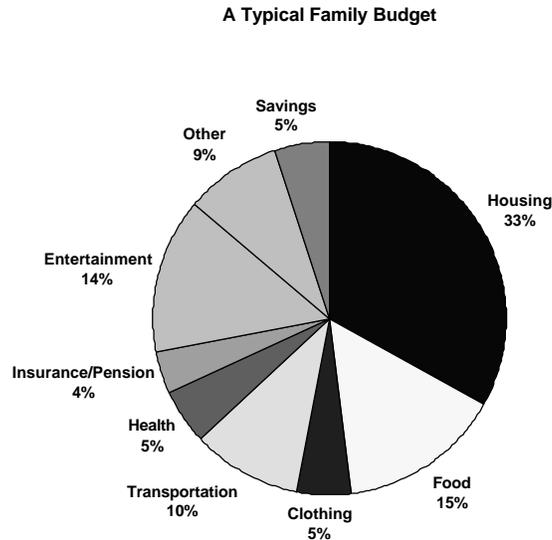
- look up information on pie charts on the Web
- read information at a website and answer short questions on reading and pie charts
- complete two practice assignments
- complete one hand-in assignment
- discuss questions or concerns about assignments with your teacher

# Spreadsheet Mathematics: Statistics and Graphing

## Lab 5: Interpreting Pie Charts or Circle Graphs

### Practice Assignment 1: Interpreting a Pie Chart

This assignment is adapted from information at the website:  
<http://intgrunits.olivet.edu/letsgo/pdf/Activity%20Sheet%20I18.pdf>



**Answer the questions based on the Typical Family Budget Pie Chart. Check your answers with the answer key for Spreadsheet Mathematics: Statistics and Graphing : Lab 5**

1. Food, housing and clothing account for what total percentage of a Typical Family Budget ? \_\_\_\_\_
2. What item accounts for the largest percentage of the budget ?  
\_\_\_\_\_
3. What item accounts for the smallest percentage of the budget ?  
\_\_\_\_\_
4. What two items together account for almost half of the budget ?  
\_\_\_\_\_

5. If a family has an annual income of \$28000, how much do they spend on:  
Housing ? \_\_\_\_\_  
Clothing ? \_\_\_\_\_  
Transportation ? \_\_\_\_\_  
Food ? \_\_\_\_\_  
Health ? \_\_\_\_\_
6. After budgeting for these 5 items, how much does the family have left for everything else ? \_\_\_\_\_
7. Do you think this budget is realistic from your own experience?  
Write a short paragraph to explain why you think this budget is realistic or why you think it isn't realistic.  
Discuss your paragraph with your teacher. It may be possible to use your completed paragraph as an alternate communications assignment.

### Practice Assignment 2: Looking up Information on Pie Charts on the Web

1. Go to the website: <http://cstl.syr.edu/fipse/TabBar/CONTENTS.HTM>
2. **Click** on the heading **Review of Circle Graphs**  
(the actual website follows)  
<http://cstl.syr.edu/fipse/TabBar/ReadCirc/REVCIRCL.HTM>
3. Read the information on circle graphs or pie charts on this webpage, paying special attention to the terms: **Graph Title**, **Sectors** and **Sector Labels**.
4. Quiz yourself by answering the questions based on the circle graph with the title: **Expenditures for State and Local Governments.**  
The answers for each question are given.
5. If you would like to quiz yourself more on circle graph interpretation, then **Click** on **Practice** and **Additional Practice** at the bottom of the webpage you have just been reading. The answers to each practice question are given.

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Now that you have worked through 2 practice assignments, complete the following Hand-In assignment and give it to your teacher for evaluation.

## Hand-In Assignment : Interpreting Information on a Pie Chart or Circle Graph

Adapted from: Statistics Canada's Internet Site: <http://www.statcan.ca/english/kits/senior.htm>  
July 23, 2001

For this assignment, you will go to a Statistics Canada Website, read a short article and interpret information on a pie chart.

1. Go to the Statistics Canada website  
<http://www.statcan.ca/english/kits/pdf/social/sport2.pdf>  
There you will find an article called: "**A family affair: Children's participation in sports**"
  
2. Read the section: ***What you should know about this study*** and answer the following questions:
  - a. How many Canadians were interviewed, and when were they interviewed?
  - b. What age were the people interviewed?
  - c. What questions were they asked ?
  - d. What activities were considered "sport" ?
  - e. Why was data not collected for physical activities such as walking, body building, dancersize and skateboarding ?
  - f. Who was considered to be "athletically active" ?
  - g. Why is the term "inactive" misleading in this study ?
  
3. Study the pie chart labelled: ***Children aged 5 to 14 who participate in organized sports are more likely to have parents involved in sports.***
  - a. Make a numbered list of several conclusions that you can draw from these two pie charts .
  - b. Do you think that these charts clearly illustrate data ? Give reasons for your answer.
  
4. Read the section with the heading: ***The apple doesn't fall far from the tree.***  
After reading the section, what do you think "***the apple doesn't fall far from the tree***" means ? Your answer should be written in several complete sentences.

5. Read the section with the heading: ***Family income also a key determinant of sports activity.***
  - a. What does a Canadian study say about family income and children's involvement in sport ?
  - b. Go on and read the section: ***What has the greatest influence on children's sports participation?*** From your reading, briefly summarize what a family with a lower income might do to encourage their children to participate in sports.

**Hand in** the answers to these questions to your teacher. You may use this as an alternate communications assignment if your teacher agrees.

### Credits

- <http://cstl.syr.edu/fipse/TabBar/CONTENTS.HTM>
- <http://intgrunits.olivet.edu/letsgo/pdf/Activity%20Sheet%20118.pdf>
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