Main ideas

- Create basic pie charts and bar charts

- Interpret data from pie charts and bar charts

- Understand the purpose and limitations of graphs

- Understand various elements of graphs.
SECTION 3.2
Displaying Qualitative Data Graphically

Learning Objectives

- Create the basic types of pie charts and bar graphs
- Interpret data given in pie charts and bar graphs
- Understand the purposes and limitations of graphs
- Understand the various elements of graphs
Why graphs?

- Let's us see the totality of observations
- Provides a quick visual picture of raw data
- May help us identify patterns or trends

Bar Charts

- Qualitative data
- Length of each bar corresponds to the number of observations in a category
- Bars are horizontal or vertical
- Axis should start at zero

Sales Performance

<table>
<thead>
<tr>
<th>Salesperson</th>
<th>Total Sales (Thousands of Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susan</td>
<td>185</td>
</tr>
<tr>
<td>William</td>
<td>190</td>
</tr>
<tr>
<td>Rob</td>
<td>205</td>
</tr>
<tr>
<td>Bob</td>
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Axis starts at 0

Axis does NOT start at 0
Pie Charts

- Displays categorical data as slices of a circle.
- The size of each slice is proportional to the amount or frequency in each category.
- Each slice is often labeled with a percentage. These percentages should total 100%.

This pie chart shows how our tax dollars were spent in Fiscal Year 2015.

Data collected from Office of Management and Budget.

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The Pizza Pie 'N Go sells about 1330 one-topping pizzas each month. The circle graph displays the most requested one-topping pizzas, by percentage, for one month.

1. Find the number of pineapple pizzas sold. Round to the nearest integer.

2. Find the number of ham pizzas sold. Round to the nearest integer.
1. Find the number of pineapple pizzas sold?
   Round to the nearest integer

   To find we can use \( \% \times \text{Total} \)

   \[ 0.19 \times 1330 = 252.7 \approx 253 \]

2. Find the number of ham pizzas sold?
   Round to the nearest integer

   To find we can use \( \% \times \text{Total} \)

   \[ 0.24 \times 1330 = 319.2 \approx 319 \]
Open your saved spreadsheet: Survey Results
Another option: Open Survey Results Part 2 available on BB

Create a bar chart and pie chart for each frequency distribution.
Instructions available on BB

Wrap Up

Sections 2.2, 2.3, 3.1, 3.2 Homework Due Feb 5