Graphical Representation of Data

(Click icon for audio)

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Duffy
by Harmond

Will you be using any visual aids in your report to the board?

Yeah, blindfolds.

No, I decided not to use 'em after all.

What?? I spent days making those things!

Besides, they're great communication tools!

You can't imagine the impact these graphs would have!

Yes, I can.
One Graph Can Depict Much Data

New York City’s Weather for 1996

Temperature
The average temperature in Central Park for 1996 was 53.7°F, cooler than the normal average temperature of 54.7°F. 1990 set the record high average of 57.2°F, which was tied in 1991.

Precipitation, in Inches
Total precipitation for 1996 was 56.19 inches. The normal annual precipitation is 47.25 inches.

Source: National Weather Service
Charts and Graphs

- Pie charts
- Bar charts
  - Vertical
  - Horizontal
- Line graphs
- Area graphs
- Box and whisker
- Quadrant analysis
Pie Charts
Pie Charts and Bar Graphs Enhance Visual Impact

Are the Products That You Presently Use Tested on Animals?

Cosmetics and Toiletries
- Yes: 48%
- No: 38%
- Don't Know: 14%
- No Answer: 2%

Over-the-Counter Medicine
- Yes: 52%
- No: 31%
- Don't Know: 15%
- No Answer: 2%

Would You Purchase Cosmetics That Had Not Been Tested on Animals?

- Yes: 89%
- No: 7%
- Don't Know: 4%
How much time off

- 34% - 3 weeks
- 25% - 2 weeks
- 18% - 4 weeks
- 13% - 1 week
- 7% - 5 weeks
- 4% - 6 weeks

Source: Maritz Ameripoll by Maritz Marketing Research, Inc. St. Louis, MO

Art: Gary True, Maritz Inc.
Bar Charts
Scatter Plots
Scatter Diagrams

a. Sales force and market coverage.

b. Sales force and out-of-stock data.

c. Sales force and average dollar amount of sale.
Line Graphs
Simple Line Graph

A Day In Traffic
The average percentage of users online peaks at 7 p.m.

Data for month of February 2001
Source: Nielsen/NetRatings
Line Graphs Highlighting Comparisons over Time

Americans spend nine more hours at the office today than they did 27 years ago.

Source: The Harris Poll
Area Graphs
Box and Whisker Plots
Quadrant Analysis

Two rating scales

4 quadrants two-dimensional table

Importance-Performance Analysis)
Quadrant Analysis for a Microwave Meal

Ratings of Product Performance on Each Attribute

High Importance/Low Rating

7,1 (Easy to prepare)
6,3 (Nutritious)
5,2 (Family meal)

High Importance/High Rating

6,6 (Good taste)
5,5 (Filling)

Low Importance/Low Rating

2,1 (Fancy meal)

Low Importance/High Rating

2,5 (Late night snack)
Different Ways to Depict Same Data
<table>
<thead>
<tr>
<th>Evaluative Dimension</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>High quality/low quality</td>
<td>4.32</td>
<td>4.00</td>
<td>2.68</td>
</tr>
<tr>
<td>Informative/uninformative</td>
<td>5.24</td>
<td>4.80</td>
<td>1.88</td>
</tr>
<tr>
<td>Good/bad</td>
<td>4.96</td>
<td>4.16</td>
<td>2.64</td>
</tr>
<tr>
<td>Persuasive/nonpersuasive</td>
<td>4.80</td>
<td>3.68</td>
<td>2.32</td>
</tr>
<tr>
<td>Artful/artless</td>
<td>3.76</td>
<td>3.04</td>
<td>2.92</td>
</tr>
<tr>
<td>Refined/vulgar</td>
<td>4.40</td>
<td>4.28</td>
<td>3.80</td>
</tr>
</tbody>
</table>

Group 1 = Fun in the Sun

Group 2 = Serious Tanning

Group 3 = At the Lake
Group 1
"Fun in the Sun"

Group 2
"Serious Tanning"

Group 3
"At the Lake"

Favorable
Neutral
Unfavorable
High quality

Informative

Good

Persuasive

Artful

Refined

Low quality

Uninformative

Bad

Nonpersuasive

Artless

Vulgar

X = “Fun in the Sun”

O = “Serious Tanning”

☐ = “At the Lake”

Snake Plot for Mean Ratings