

Making Charts

"A picture is worth a thousand words"

- * Graphs and charts are a visual way to reduce columns of numbers to a meaningful visual context.**
- * The use of graphs and charts grew independently in a variety of disciplines, so there is a verbose terminology and often confusing verbiage.**
- * “There’s a sucker born every minute!”**

“Charting” Programs

- * Charting and/or graphing programs**
- * Charting and/or graphic modules that are portions of spreadsheets**
- * Graphs or charts produced by programs as standard output**

Data Types

- * **Continuous** - numerical or alphabetical data where the position on an axis represents some ranked continuum
- * **Categorical** - data where the position on an axis has no intrinsic meaning

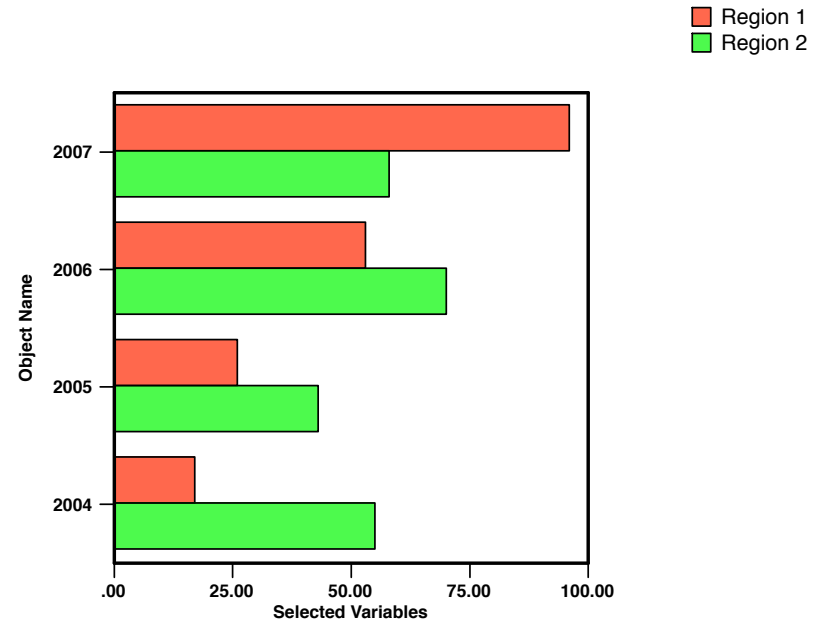
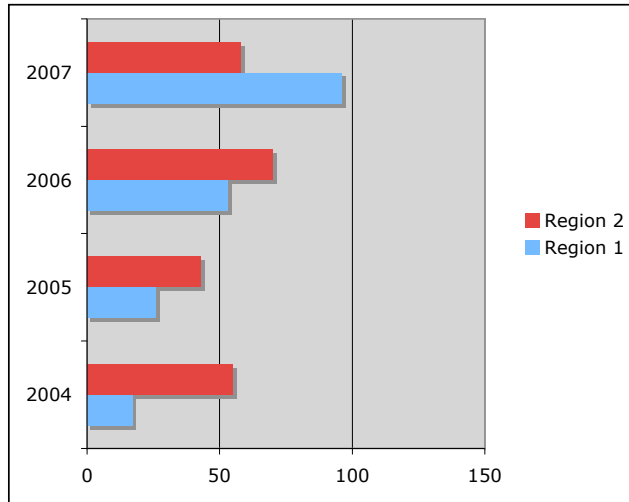
| Chart | X | Y | Z | Comments |
|---------------------|------------------|------------------|------------------|-----------------------------|
| Bar | Numerical | Cat | * | |
| Column | Cat | Numerical | * | Histogram display |
| Area | Cat | Numerical | * | |
| Line | Cat/Num | Numerical | | |
| Scatter | Cat/Num | Cat/Num | Numerical | XYYYYYYYYY |
| Paired Scat | Cat/Num | Cat/Num | Numerical | XYXYXYXYXY |
| Pie | Numerical | | | % or totals |
| Ternary | Numerical | Numerical | Numerical | Percentages |
| Polar | Angle/ | Radius/ | | Varies by discipline |
| Rose | Angle | Numerical | | Count or % |
| Contour | Numerical | Numerical | Numerical | XYZ data |
| Grid Contour | | | Numerical | Tabular format |

*** = May have pseudo-3D charts**

Programs

- * **Aabel, Deltagraph, Kaleidograph**
- * **Excel, AppWorksSS, QuatroPro, Wingz**
- * **Illustrator, Keynote, etc....**
- * **Data formats can vary widely from program to program - you must check with the particular program to see what it 'expects'.**

Bar Chart



| | 2004 | 2005 | 2006 | 2007 |
|----------|------|------|------|------|
| Region 1 | 17 | 26 | 53 | 96 |
| Region 2 | 55 | 43 | 70 | 58 |

Excel

| | Object Label | Region 1 | Region 2 |
|---|--------------|----------|----------|
| 1 | 2004 | 17.00 | 55.00 |
| 2 | 2005 | 26.00 | 43.00 |
| 3 | 2006 | 53.00 | 70.00 |
| 4 | 2007 | 96.00 | 58.00 |
| 5 | | | |

Aabel

Bar Chart

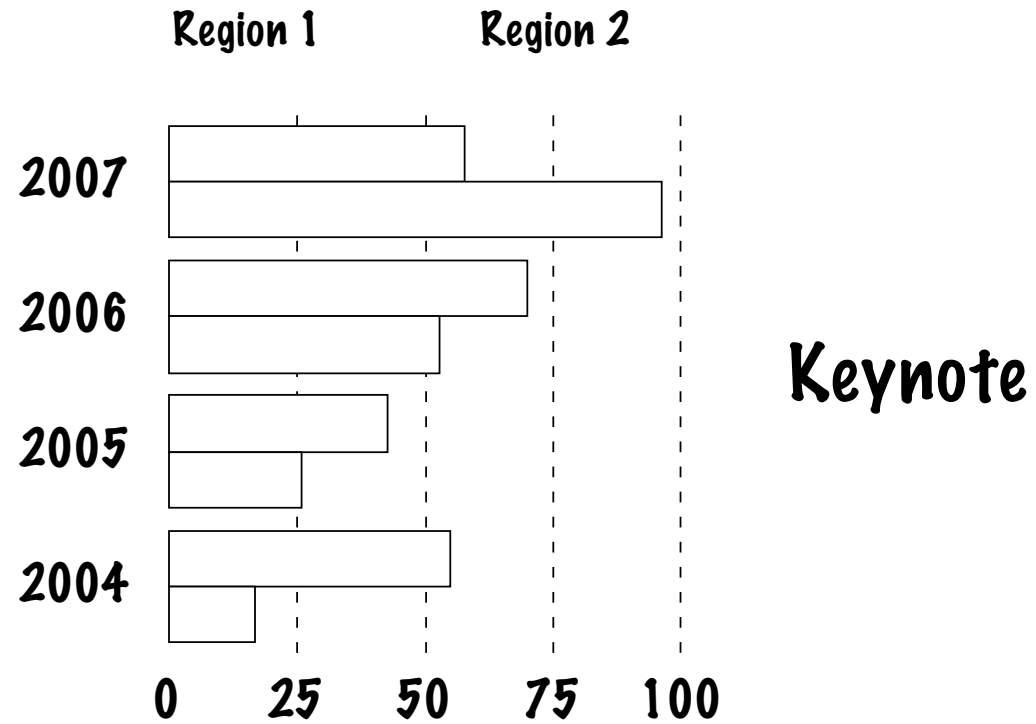
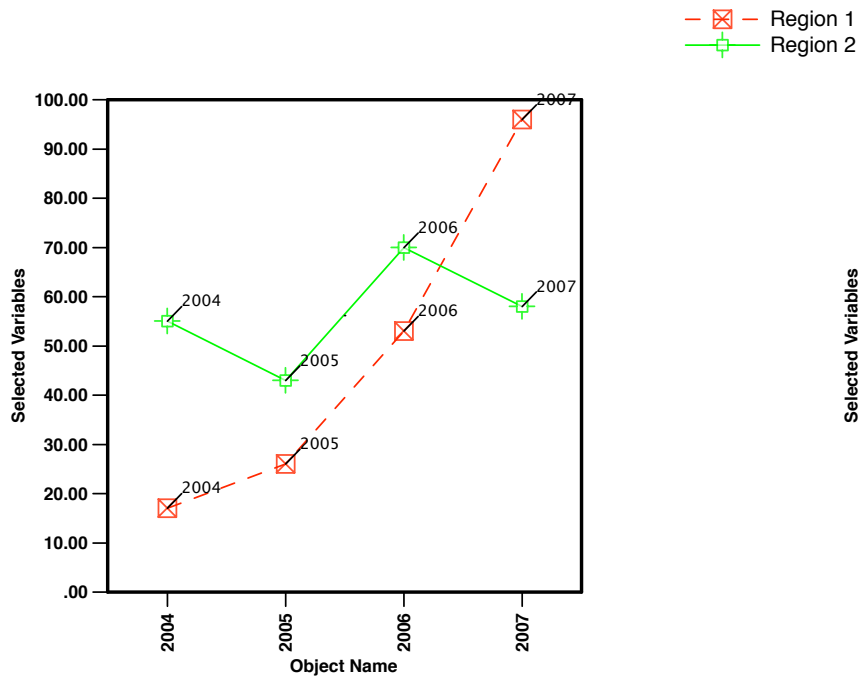


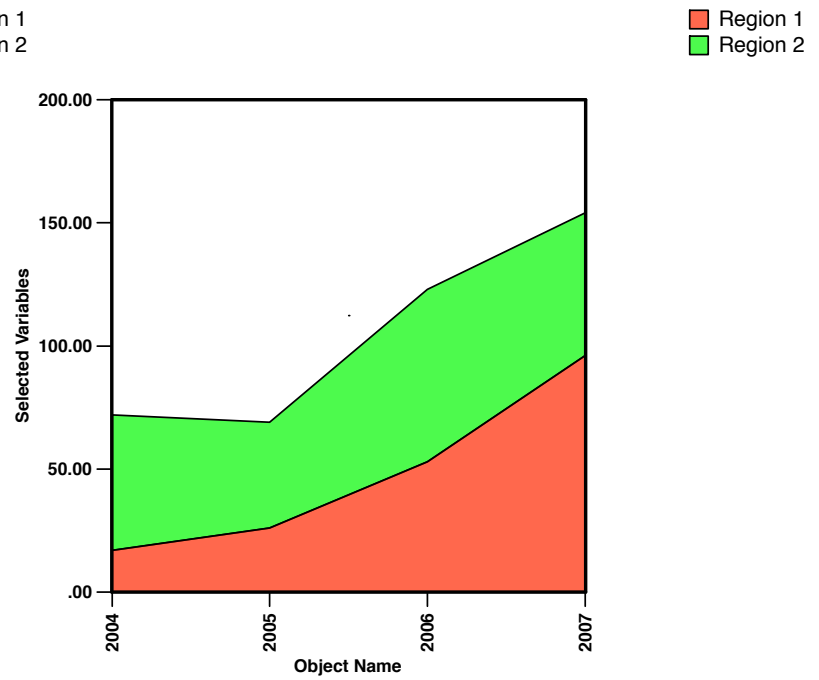
Chart Data Editor

Add Row Add Column Plot Row vs. Column: [Bar]

| | 2004 | 2005 | 2006 | 2007 |
|----------|------|------|------|------|
| Region 1 | 17 | 26 | 53 | 96 |
| Region 2 | 55 | 43 | 70 | 58 |



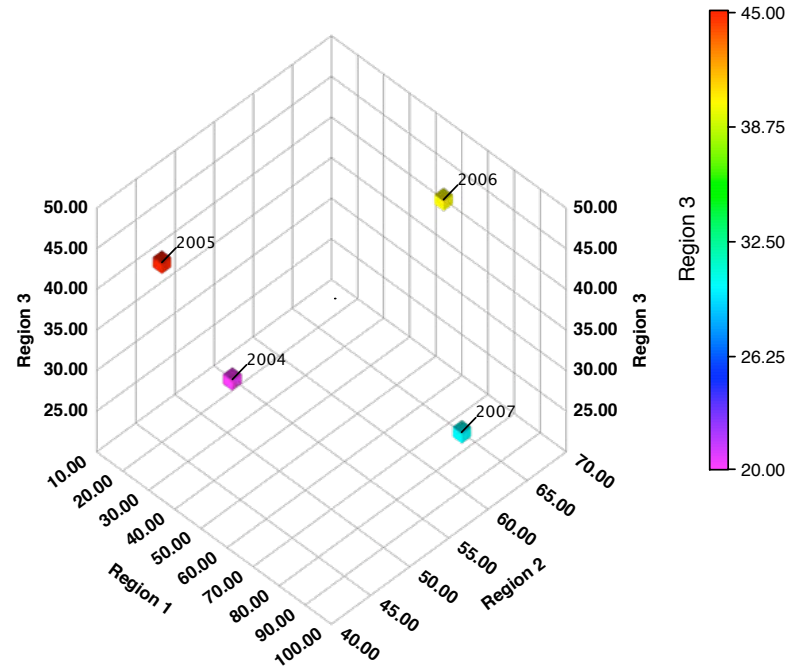
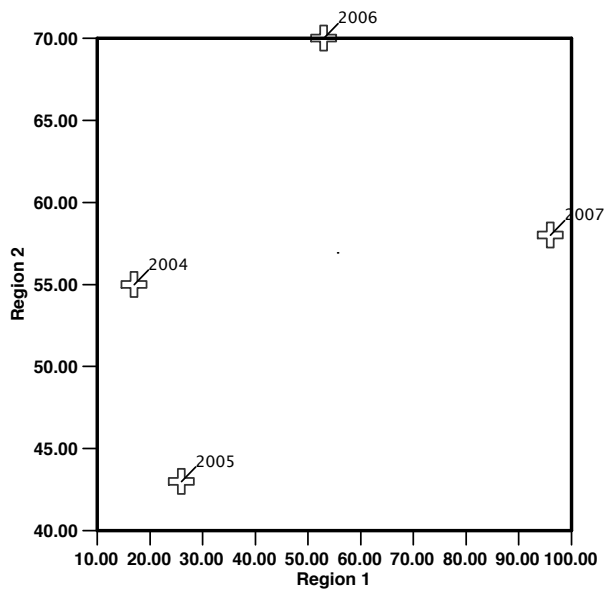
Line Chart

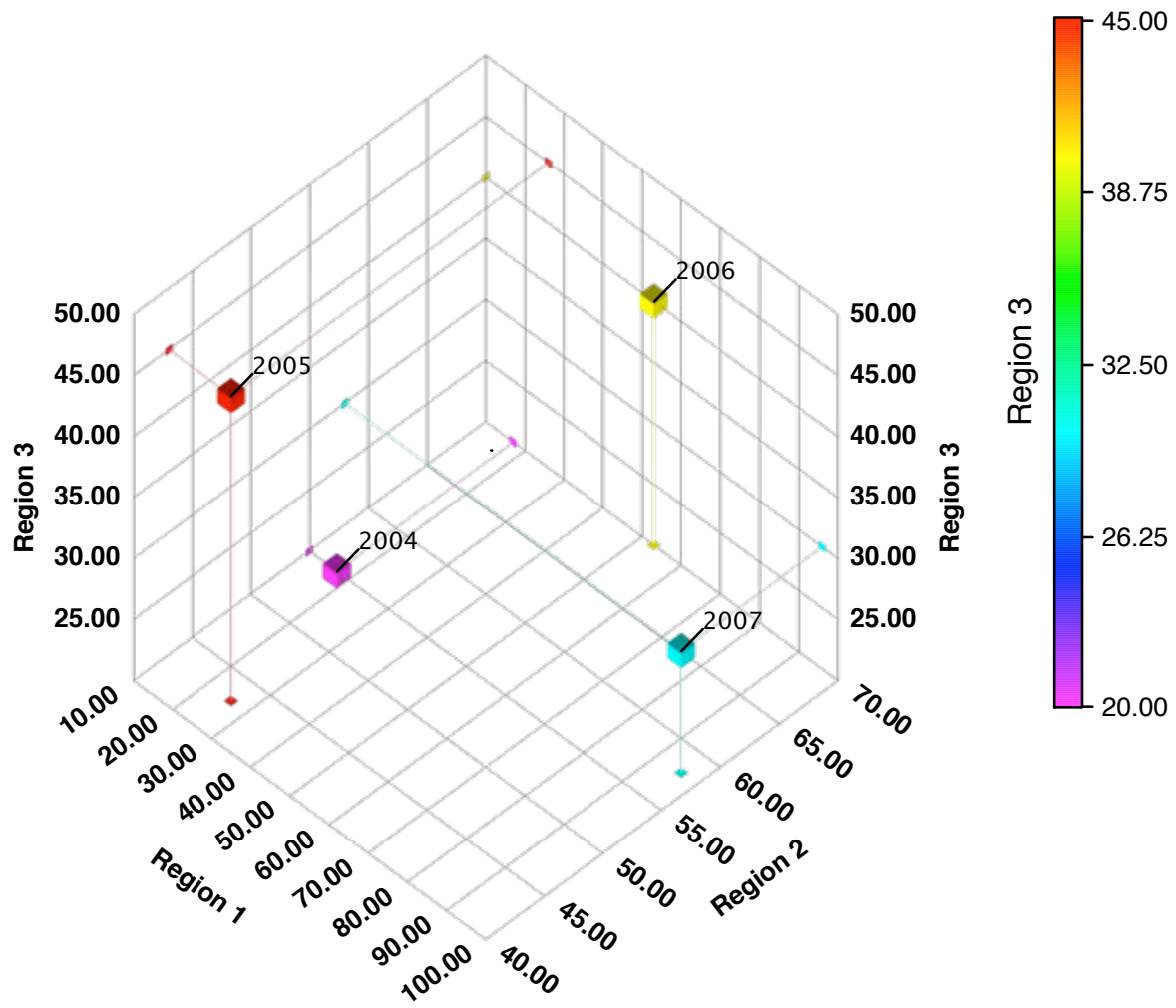


Area Chart

Scatter Charts

+ untitled worksheet2



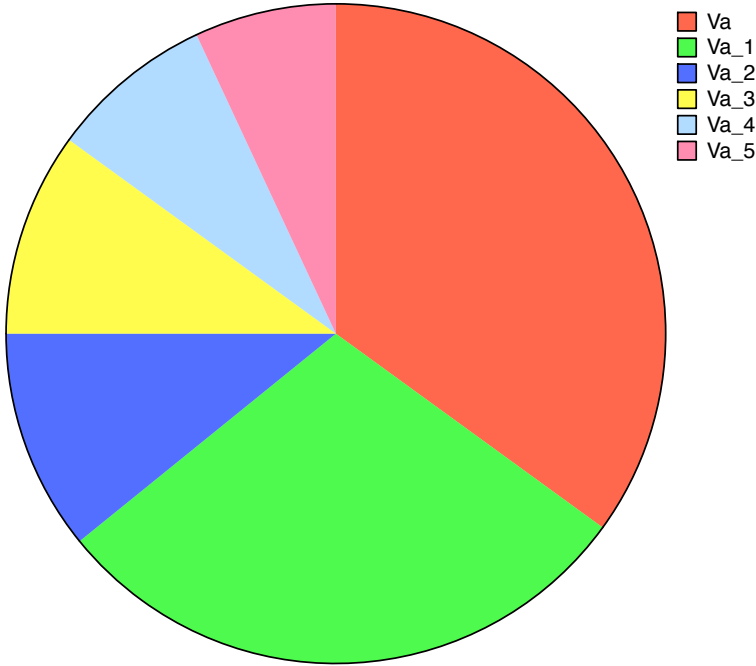
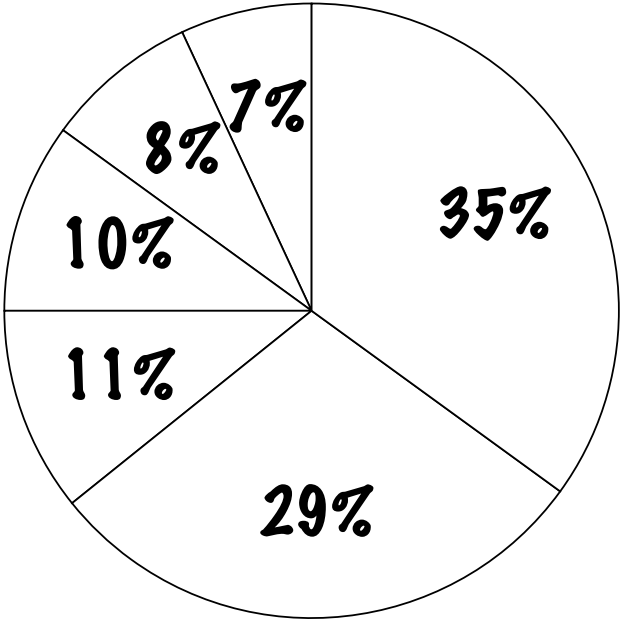


Pie Charts

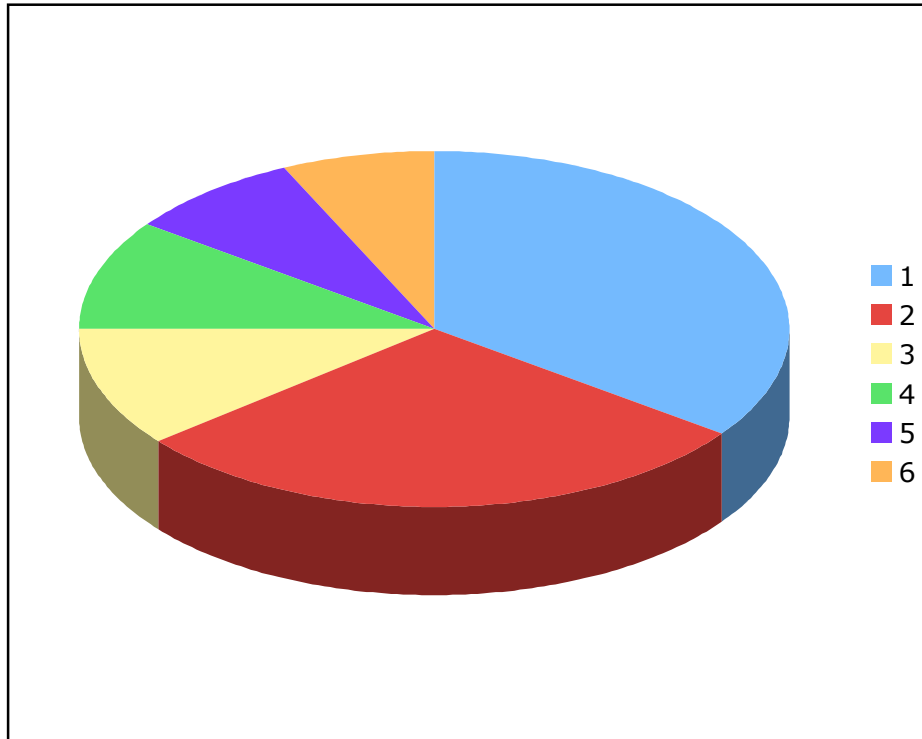
2002
2005

2003
2006

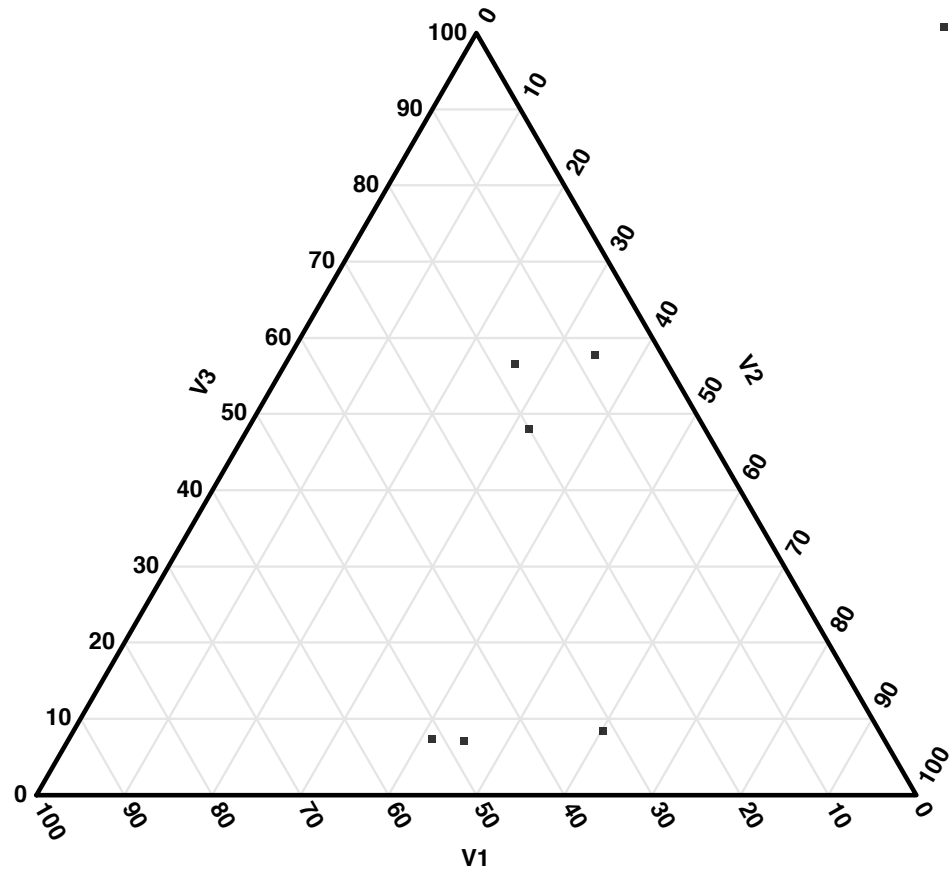
2004
2007



3-D Pie Chart

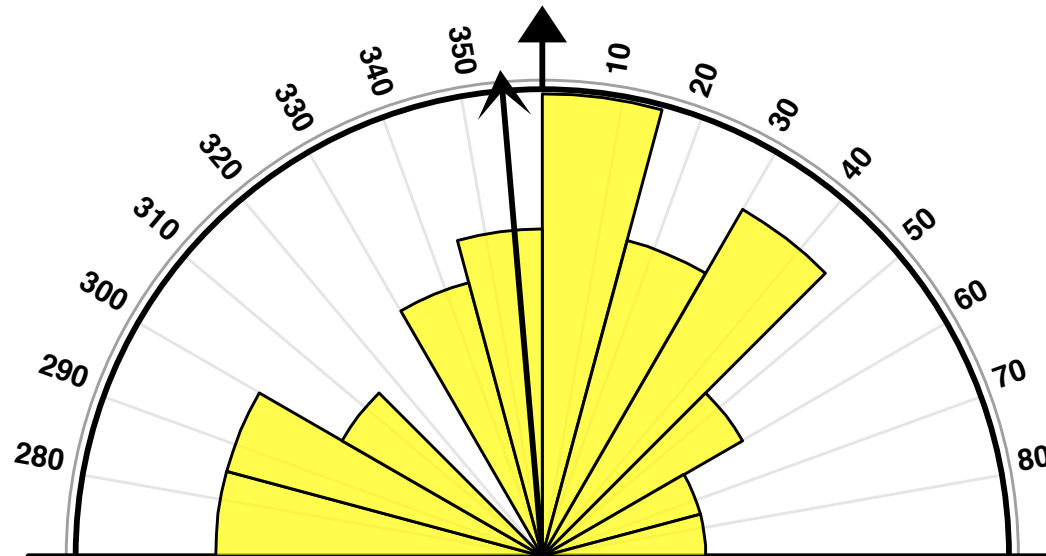


Ternary



▪ untitled worksheet

Rose Diagram



| |
|----------------------------------|
| N: 39 |
| Max Count: 8 |
| Mean Direction: 355.1° |
| Circular Variance: 0.2832 |
| Counting interval: 15° |
| Orientation: Var_3 |