



Charting Documentation

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Introduction

This document lists the commands available for creating charts. You should familiarize yourself with the commands for the standard product first.

The charting feature currently allows you to create five types of charts:

- ◆ [Bar Charts](#)
- ◆ [Line Charts](#)
- ◆ [Scatter Charts](#)
- ◆ [Area Charts](#)
- ◆ [Pie Charts](#)

The commands for each are described in the following pages. Note that the line and bar types may be shown together on the same chart if you wish. Charts are contained within a charting block. A charting block begins with the command

```
CHART=BAR-LINE>> or CHART=AREA>> or CHART=PIE>>
```

Next, the commands for the chart are listed followed by

```
CHARTEND>>
```

which signals the end of the commands for the chart.

Bar Charts

Commands start at the beginning of the line and end at >>.

All commands must be entered as COMMAND=X,Y,... with no space between command, equal sign and parameters.

CHART=X Used to specify the type of chart.
X = BAR-LINE for either a bar or line chart.
X = AREA for an area chart.
X = PIE for a pie chart.

CHARTPOS=X1,Y1,X2,Y2
Used to position the bounding box for the chart in inches.
Charts are positioned on the page with regard to the current BOX statement.
(See the standard PDF File Creator document for information on the BOX command.)
X1 = Left grid position.
Y1 = Top grid position.
X2 = Right grid position.
Y2 = Bottom grid position.
This bounding represents the minimum amount of space to be used for the chart.
If the chart title or legend needs more room it will take what is needed by flowing out above or below the defined space so be sure to account for any extra room the chart may need.

CHARTTITLE='My Chart\nTitle'
Used to specify the title for the chart.
Use a \n to indicate a new line. Be sure to enclose in quotes.

CHARTTITLEFONT=A,B
Used to specify the font and size for the chart title.
A = Font (see the standard PDF File Creator documentation).
B = Point size.

CHARTYAXISLAB='Dollars (thousands)'
Used to specify a title to show for the Y-axis.
Be sure to enclose in quotes.

CHARTYAXISFONT=A,B
Used to specify the font and size for the Y-axis label.
A = Font (see the standard PDF File Creator documentation).
B = Point size.

CHARTBARDATA=X1,X2,...,Xn
Used to specify the series of data for the bars.
X1 through Xn must be numeric (no commas or other formatting).
You may use negative numbers but be sure the CHARTYSCALE command accommodates this.

CHARTDATALAB='A1|A2|...|An'

Used to specify the labels for the data series.

A1 through An can be any text data you want to display above the bar.

Each is separated by a vertical bar.

Use a \n to indicate a new line. For example Year\n2000 will print as:

Year
2000

above the corresponding bar. Leave an entry blank (i.e. ||) to leave a label off that bar.

CHARTLABFONT=A,B

Used to specify the font and size for the chart data, X-axis and Y-axis labels.

A = Font (see the standard PDF File Creator documentation).

B = Point size.

CHARTXLAB='A1|A2|...|An'

Used to specify the labels for the X-axis.

A1 through An can be any text data you want to display below the chart.

Each is separated by a vertical bar. Use a \n to indicate a new line (like CHARTDATLAB).

CHARTYLAB='A1|A2|...|An'

Used to specify the labels for the Y-axis.

A1 through An can be any text data you want to display along the Y-axis.

Each is separated by a vertical bar and can only be one line long (the \n is not used).

CHARTYSCALE=Y1,Y2

Used to specify the minimum and maximum values for the Y-axis.

Y1 = The minimum value for the Y-axis.

Y2 = The maximum value for the Y-axis.

To show percentages from 0 to 100 for example, use Y1=0 and Y2=100.

Either or both numbers may be negative but be sure to have the smaller number first.

CHARTBARMARGIN=X

Used to specify the amount for the margin between the Y-axis and the first bar.

X = a percentage of the size of the chart (typically 5 or 10 works good).

Setting X to 5 means out of the size allocated for the chart, leave 5% as the margin.

CHARTBARSPACE=X

Used to specify the amount of space between bars.

X = a percentage of the size of each bar.

Setting X to 10 means out of the size allocated for each bar, shrink it by 10%.

This is used if you want to separate the bars a bit rather than have one right next to another.

CHARTBARCOLOR=A1,A2,...An

Used to specify the [colors](#) for the bars.

A1 through An represent the color to use for each bar.

The colors are predefined and, if not specified, each bar is colored based on its position.

That is, the first bar is colored with color 1, the second with color 2 and so on.

You can use this command to specify the color order and to color all of the bars the same color.

CHARTXGRID=X

Used to specify a grid along the X-axis points.

X = the number of equally spaced vertical lines to draw.

Although you can use with a bar chart, you would likely use this with a line chart.

CHARTYGRID=X

Used to specify a grid along the Y-axis points.

X = the number of equally spaced horizontal lines to draw.

CHART3D=X

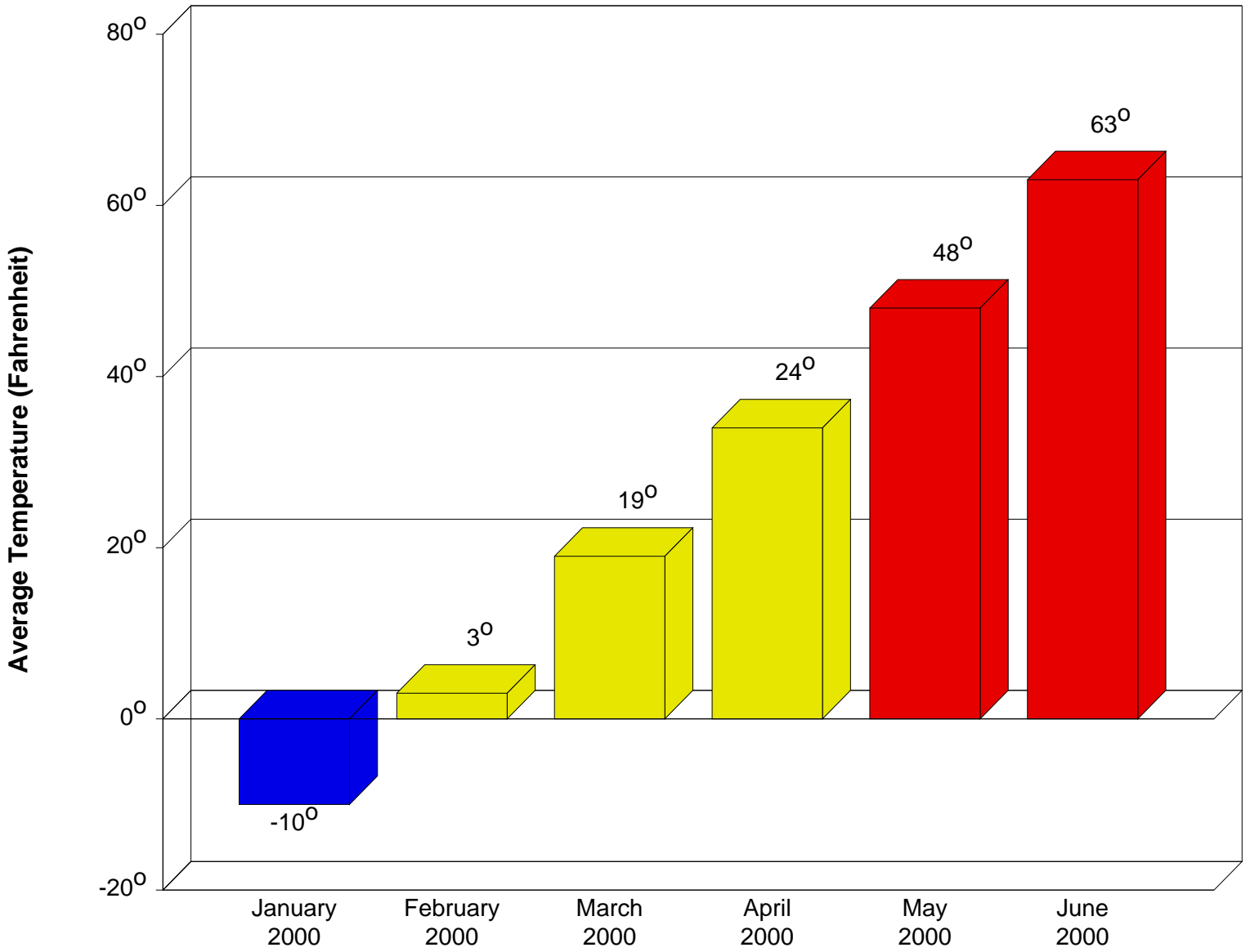
Used to specify the bars should be drawn 3D.

X = Depth of each bar (typically 5 to 20 works good).

Putting it all together, here is a sample. The following page shows the chart.

```
PAGE=8.5,11>>
BOX=.5,2,7.5,6,10,10>>
CHART=BAR-LINE>>
CHARTPOS=0,0,10,10>>
CHARTTITLEFONT=5,18>>
CHART3D=20>>
CHARTTITLE='Average Temperatures\nby Month'>>
CHARTBARDATA=-10,3,19,34,48,63>>
CHARTDATALAB='-10<SUP>o</SUP>|3<SUP>o</SUP>| (continued on next line)
19<SUP>o</SUP>|24<SUP>o</SUP>|48<SUP>o</SUP>|63<SUP>o</SUP>'>>
CHARTXLAB='January\n2000|February\n2000| (continued on next line)
March\n2000|April\n2000|May\n2000|June\n2000'>>
CHARTLABFONT=2,11>>
CHARTYAXISLAB='Average Temperature (Fahrenheit)'\>>
CHARTYAXISFONT=5,12>>
CHARTBARCOLOR=3,4,4,4,1,1>>
CHARTYSCALE=-20,80>>
CHARTYGRID=5>>
CHARTYLAB='-20<SUP>o</SUP>|0<SUP>o</SUP>|20<SUP>o</SUP>| (continued on next line)
40<SUP>o</SUP>|60<SUP>o</SUP>|80<SUP>o</SUP>'>>
CHARTBARMARGIN=5>>
CHARTBARSPACE=30>>
CHARTEND>>
```

Average Temperatures by Month



Bar Chart Groupings

Another type of bar chart is one which shows data groups. For instance, you may want to show several different values for a single label (i.e. actual vs. projected). You can use the following commands to tell the program to group your data.

CHARTDATAMULT=X

Used to specify how many values should be grouped together.

X = the number of values to group (ex. 2 for grouping actual and projected).

CHARTDATAMLAB='A1|A2|...|An'

Used to specify the label for each group.

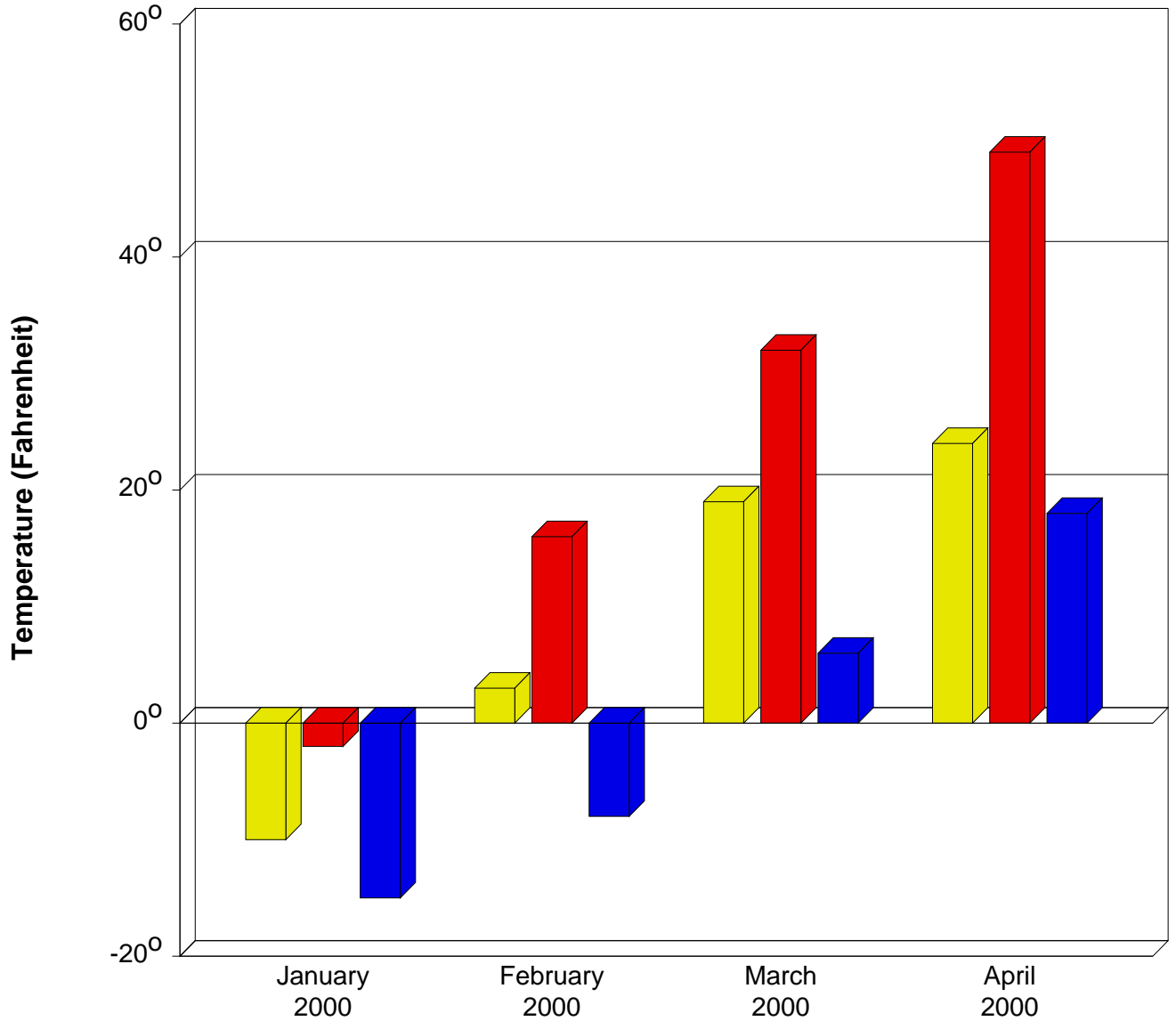
A1 through An are the labels for each group.

If CHARTDATAMULT is set to 2, you should have two entries here.

Here is a sample using the grouping. The following page shows the chart.

```
PAGE=8.5,11>>
BOX=.5,2,7.5,6,10,10>>
CHART=BAR-LINE>>
CHARTPOS=0,0,10,10>>
CHARTTITLEFONT=5,18>>
CHART3D=10>>
CHARTTITLE='Temperatures\nby Month'>>
CHARTDATAMULT=3>>
CHARTDATAMLAB='Average Degrees|High|Low'>>
CHARTBARDATA=-10,-2,-15,3,16,-8,19,32,6,24,49,18>>
CHARTDATALAB='-10|-2|-15|3|16|-8|19|32|6|24|49|18'>>
CHARTXLAB='January\n2000|February\n2000|March\n2000|April\n2000'>>
CHARTLABFONT=2,11>>
CHARTYAXISLAB='Temperature (Fahrenheit)'>>
CHARTYAXISFONT=5,12>>
CHARTBARCOLOR=4,1,3,4,1,3,4,1,3,4,1,3>>
CHARTYSCALE=-20,60>>
CHARTYGRID=4>>
CHARTYLAB='-20<SUP>o</SUP>|0<SUP>o</SUP>|20<SUP>o</SUP>| (continued on next line)
40<SUP>o</SUP>|60<SUP>o</SUP>'>>
CHARTBARMARGIN=5>>
CHARTBARSPACE=30>>
CHARTEND>>
```


Temperatures by Month



■ Average Degrees	-10	3	19	24
■ High	-2	16	32	49
■ Low	-15	-8	6	18

Line Charts

Line charts are similar to the bar chart described in the previous section.
The following are the commands for line charts which may be displayed on top of bar charts.

CHARTDATALINE*n=A1,A2,...An*

Used to define a line of data.

Each line will have its own CHARTDATALINE (i.e. CHARTDATALINE1, CHARTDATALINE2,...)

A1 through An represent the Y-axis values for each point.

CHARTLINECOLOR=A1,A2,...An

Used to specify the [colors](#) for the lines.

A1 through An represent the color to use for each line.

The colors are predefined and, if not specified, each line is colored based on its position.

That is, the first line is colored with color 1, the second with color 2 and so on.

CHARTLINENODE=A

Used to indicate nodes should be drawn at the points.

A = The letter Y to turn on drawing of line nodes.

CHARTLEGEND='A1|A2|...|An'

Used to specify the labels for the legend.

A1 through An can be any text data you want to display below the chart.

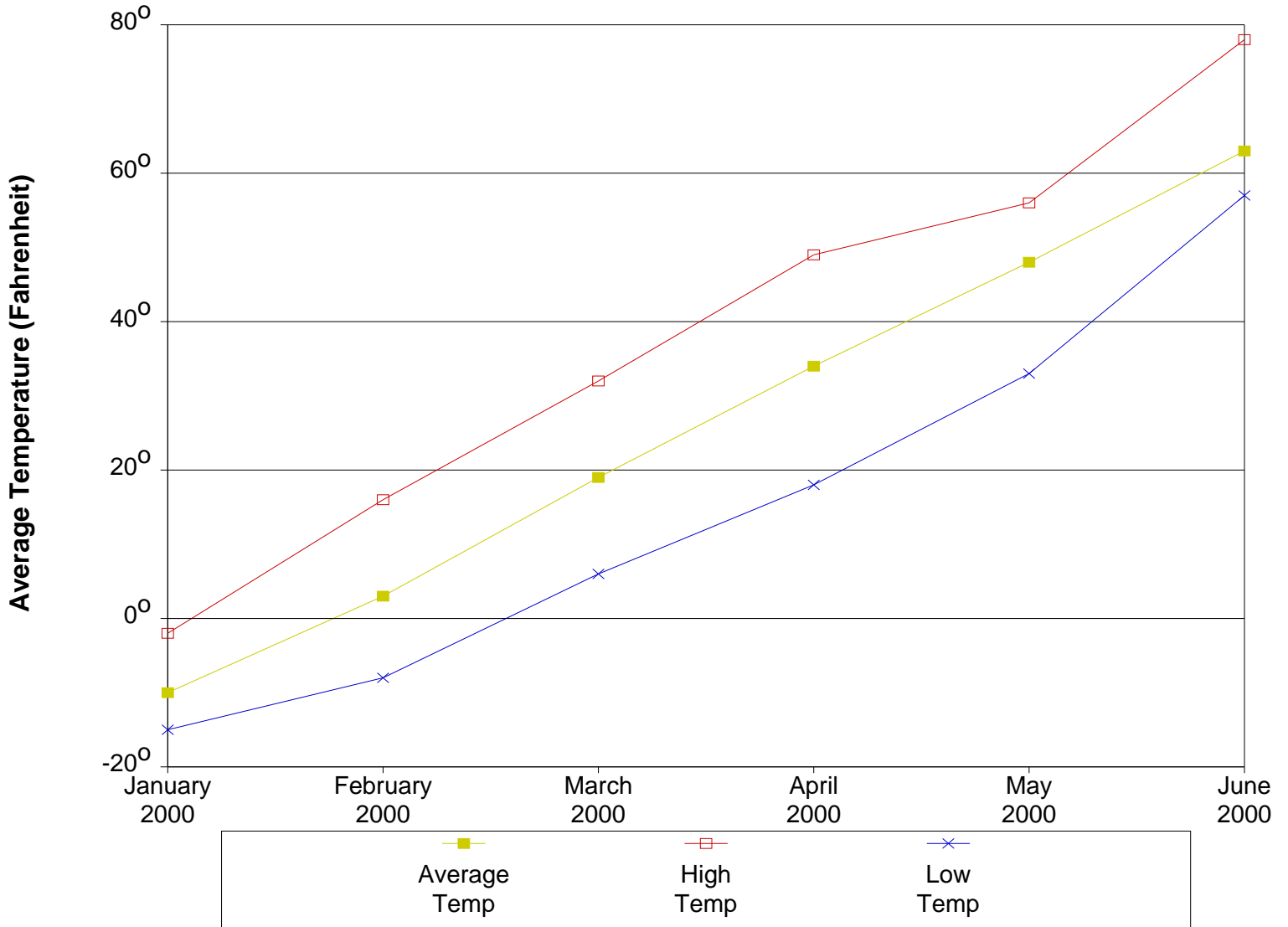
Each is separated by a vertical bar. Use a \n to indicate a new line (like CHARTDATLAB).

The first entry is for the first line, next entry is for the second line and so on.

Here is a sample line chart. The following page shows the chart.

```
PAGE=8.5,11>>
BOX=.5,2,7.5,6,10,10>>
CHART=BAR-LINE>>
CHARTPOS=0,0,10,10>>
CHARTTITLEFONT=5,18>>
CHART3D=0>>
CHARTTITLE='Average Temperatures\nby Month'>>
CHARTDATALINE1=-10,3,19,34,48,63>>
CHARTDATALINE2=-2,16,32,49,56,78>>
CHARTDATALINE3=-15,-8,6,18,33,57>>
CHARTLINENODE=Y>>
CHARTLEGEND='Average\nTemp | High\nTemp\n | Low\nTemp'>>
CHARTXLAB='January\n2000 | February\n2000 | (continued on next line)
March\n2000 | April\n2000 | May\n2000 | June\n2000'>>
CHARTLABFONT=2,11>>
CHARTYAXISLAB='Average Temperature (Fahrenheit)'>>
CHARTYAXISFONT=5,12>>
CHARTLINECOLOR=4,1,3>>
CHARTYSCALE=-20,80>>
CHARTYGRID=5>>
CHARTXGRID=1>>
CHARTYLAB='-20<SUP>o</SUP> | 0<SUP>o</SUP> | 20<SUP>o</SUP> | (continued on next line)
40<SUP>o</SUP> | 60<SUP>o</SUP> | 80<SUP>o</SUP>'>>
CHARTBARMARGIN=5>>
CHARTBARSPACE=30>>
CHARTEND>>
```

Average Temperatures by Month



Scatter Charts

Scatter charts are used to compare value pairs. Scatter charts use the same commands as the line charts except they additionally have the following differences and commands:

CHARTDATALINE n =X1,Y1,...X n ,Y n

Used to define a set of points.

Each set of points will have its own CHARTDATALINE (CHARTDATALINE1, CHARTDATALINE2,...)

X1,Y1 through X n ,Y n represent the X and Y-axis values for each point.

CHARTXSCALE=X1,X2

Used to specify the minimum and maximum values for the X-axis.

X1 = The minimum value for the X-axis.

X2 = The maximum value for the X-axis.

To show percentages from 0 to 100 for example, use X1=0 and X2=100.

Either or both numbers may be negative but be sure to have the smaller number first.

CHARTDOTSIZE=N

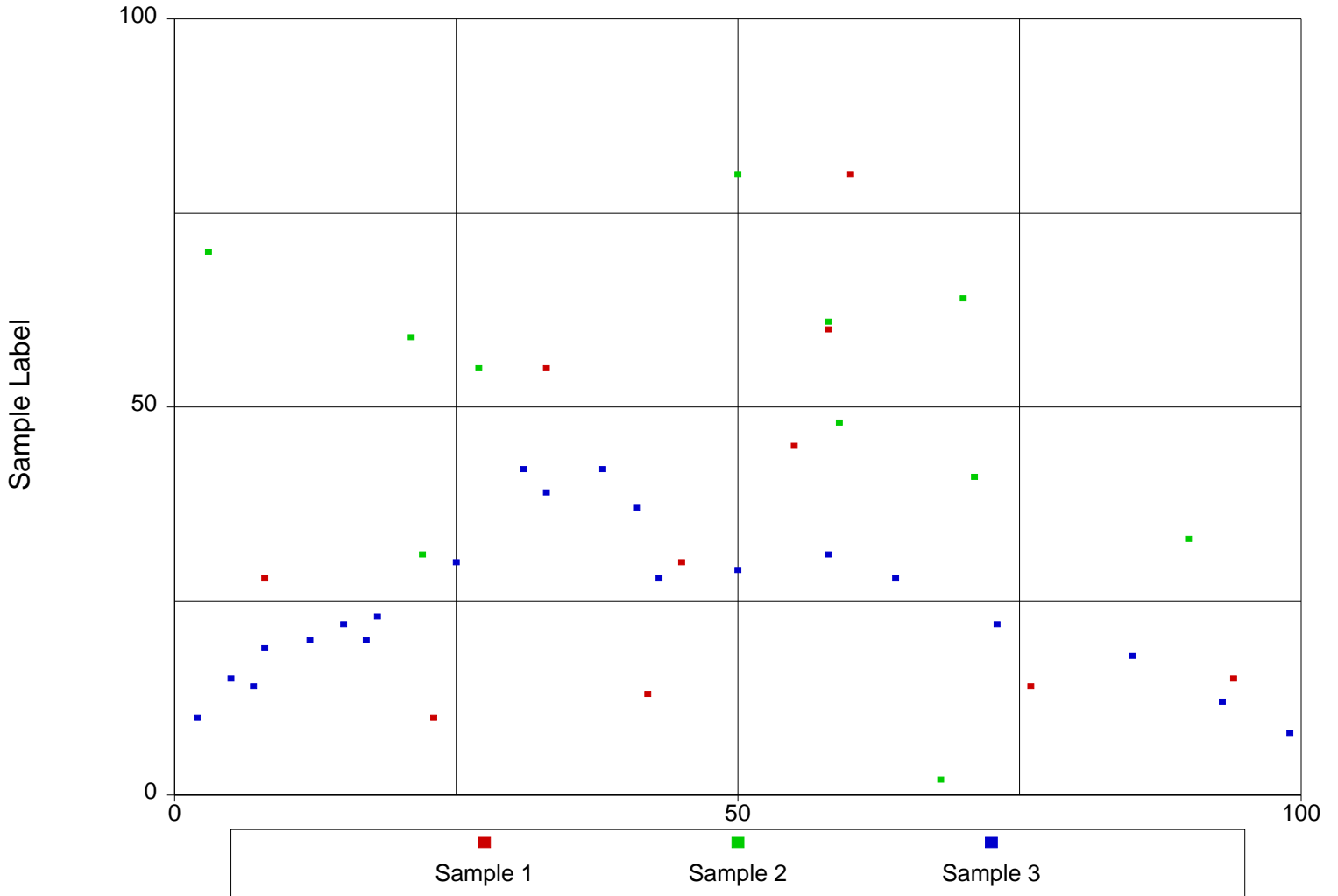
Used to indicate the size of the nodes drawn for the data points.

N = A positive number from 1 to 10.

Here is a sample scatter chart. The following page shows the chart.

```
PAGE=8.5,11>>
BOX=.5,2,7.5,6,10,10>>
CHART=SCATTER>>
CHARTPOS=0,0,10,10>>
CHARTTITLEFONT=5,18>>
CHART3D=0>>
CHARTDATALINE1=23,10,45,30,8,28,55,45,58,60,60,80,94,15,42,13,76,14,33,55>>
CHARTDATALINE2=3,70,50,80,70,64,90,33,27,55,71,41,68,2,59,48,22,31,58,61,21,59>>
CHARTDATALINE3=2,10,5,15,7,14,8,19,12,20,15,22,17,20,18,23(continued on next line)
,25,30,31,42,33,39,38,42,41,37,43,28,50,29,58,31,64,28,73,22,85,18,93,12,99,8>>
CHARTLEGEND='Sample 1|Sample 2|Sample 3'>>
CHARTYAXISFONT=2,12>>
CHARTYAXISLAB='Sample Label'>>
CHARTXGRID=4>>
CHARTYGRID=4>>
CHARTDOTSIZE=5>>
CHARTYSCALE=0,100>>
CHARTXSCALE=0,100>>
CHARTYLAB='0|50|100'>>
CHARTXLAB='0|50|100'>>
CHARTLABFONT=2,10>>
CHARTTITLEFONT=5,20>>
CHARTTITLE='Sample Scatter\nChart'>>
```

Sample Scatter Chart



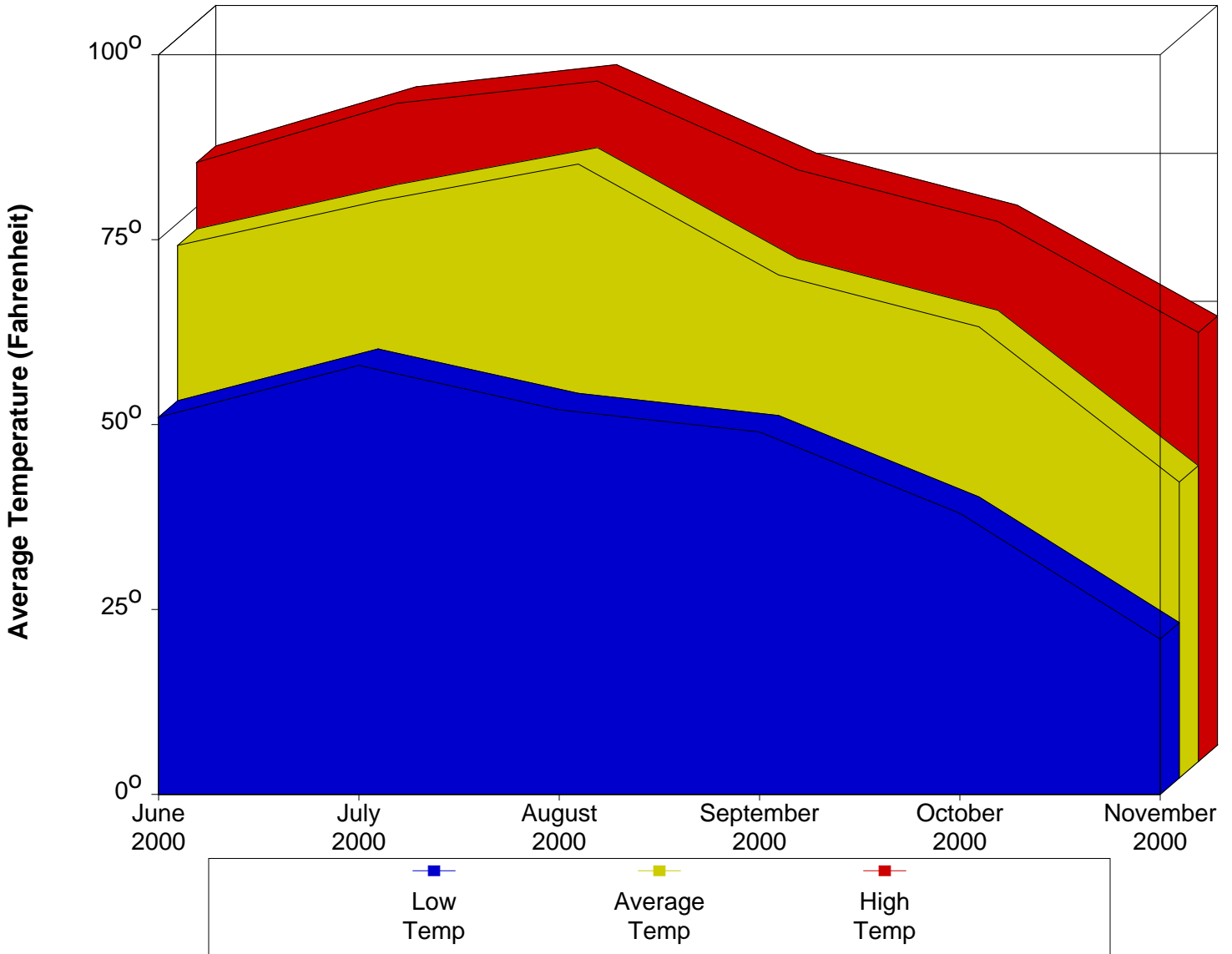
Area Charts

Area charts are simply line charts with a 3D effect to them.
Area charts are created by using the CHART=AREA command.
Use the same commands for [line charts](#).
Set the [CHART3D](#) value to create depth.

Here is a sample area chart. The following page shows the chart.

```
PAGE=8.5,11>>
BOX=.5,2,7,6,10,10>>
CHART=AREA>>
CHARTPOS=0,0,10,10>>
CHARTTITLEFONT=5,18>>
CHART3D=40>>
CHARTTITLE='Average Temperatures\nby Month'>>
CHARTDATALINE1=51,58,52,49,38,21>>
CHARTDATALINE2=72,78,83,68,61,40>>
CHARTDATALINE3=81,89,92,80,73,58>>
CHARTLINENODE=Y>>
CHARTLEGEND='Low\nTemp | Average\nTemp | High\nTemp\n'>>
CHARTXLAB='June\n2000 | July\n2000 | (continued on next line)
August\n2000 | September\n2000 | October\n2000 | November\n2000'>>
CHARTLABFONT=2,11>>
CHARTYAXISLAB='Average Temperature (Fahrenheit)'\>>
CHARTYAXISFONT=5,12>>
CHARTLINECOLOR=3,4,1>>
CHARTYSCALE=0,100>>
CHARTYGRID=5>>
CHARTXGRID=1>>
CHARTYLAB='0<SUP>o</SUP> | 25<SUP>o</SUP> | 50<SUP>o</SUP> | (continued on next line)
75<SUP>o</SUP> | 100<SUP>o</SUP>'>>
CHARTBARMARGIN=5>>
CHARTBARSPACE=30>>
CHARTEND>>
```


Average Temperatures by Month



Pie Charts

Pie charts are created by using the CHART=PIE command.

Some of the commands are the same as when using a bar chart. Only the visual representation of the chart changes. The following is a list the differences for each command.

CHARTBARDATA=X1,X2,...,Xn

Used to specify the series of data for the pie slices.

X1 through Xn must be numeric (no commas or other formatting).

Do not use negative numbers - all values should be positive.

CHARTBARCOLOR=A1,A2,...,An

Used to specify the [colors](#) for the pie slices.

A1 through An represent the color to use for each slice.

The colors are predefined and, if not specified, each slice is colored based on its position.

That is, the first slice is colored with color 1, the second with color 2 and so on.

You can use this command to specify the color order and to color all of the slices the same color.

CHARTDATALAB='A1|A2|...|An'

Used to specify the labels for each slice.

A1 through An can be any text data you want to display in the slice.

Each is separated by a vertical bar.

Use a \n to indicate a new line.

CHARTPIEOFFSET=X

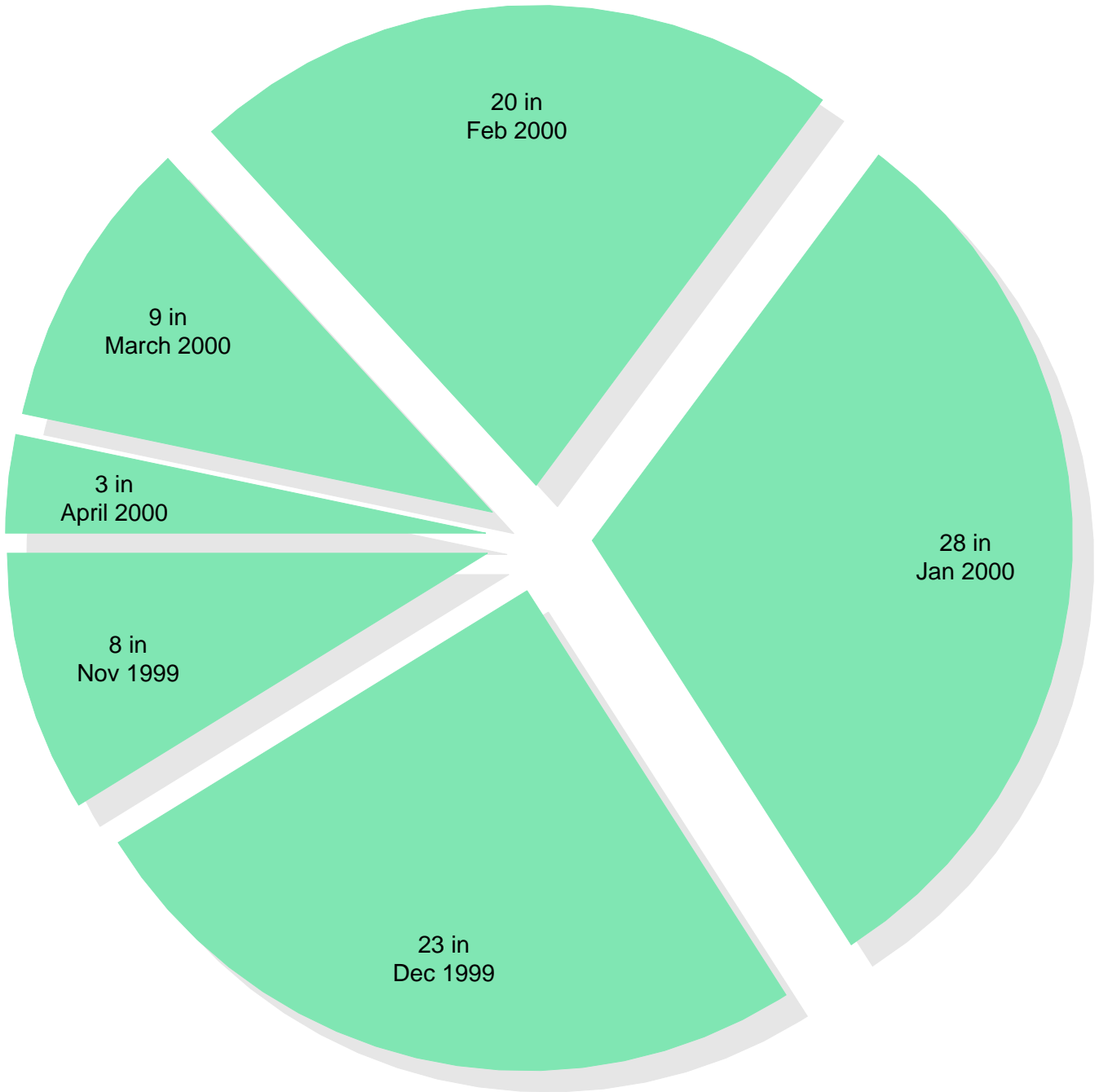
Used to specify an offset amount to break out the pie pieces.

X = a percentage of the size of the chart (typically 5 or 10 works good).

Here is a sample pie chart. The following page shows the chart.

```
PAGE=8.5,11>>
BOX=.5,2,7.5,6,10,10>>
CHART=PIE>>
CHARTPOS=0,0,10,10>>
CHARTTITLEFONT=5,18>>
CHART3D=2>>
CHARTPIEOFFSET=5>>
CHARTTITLE='Number of Days\nBelow Zero\nby Month'>>
CHARTBARDATA=8,23,28,20,9,3>>
CHARTDATALAB='8 in\nNov 1999|23 in\nDec 1999| (continued on next line)
28 in\nJan 2000|20 in\nFeb 2000|9 in\nMarch 2000|3 in\nApril 2000'>>
CHARTLABFONT=2,11>>
CHARTBARCOLOR=13,13,13,13,13,13>>
CHARTEND>>
```

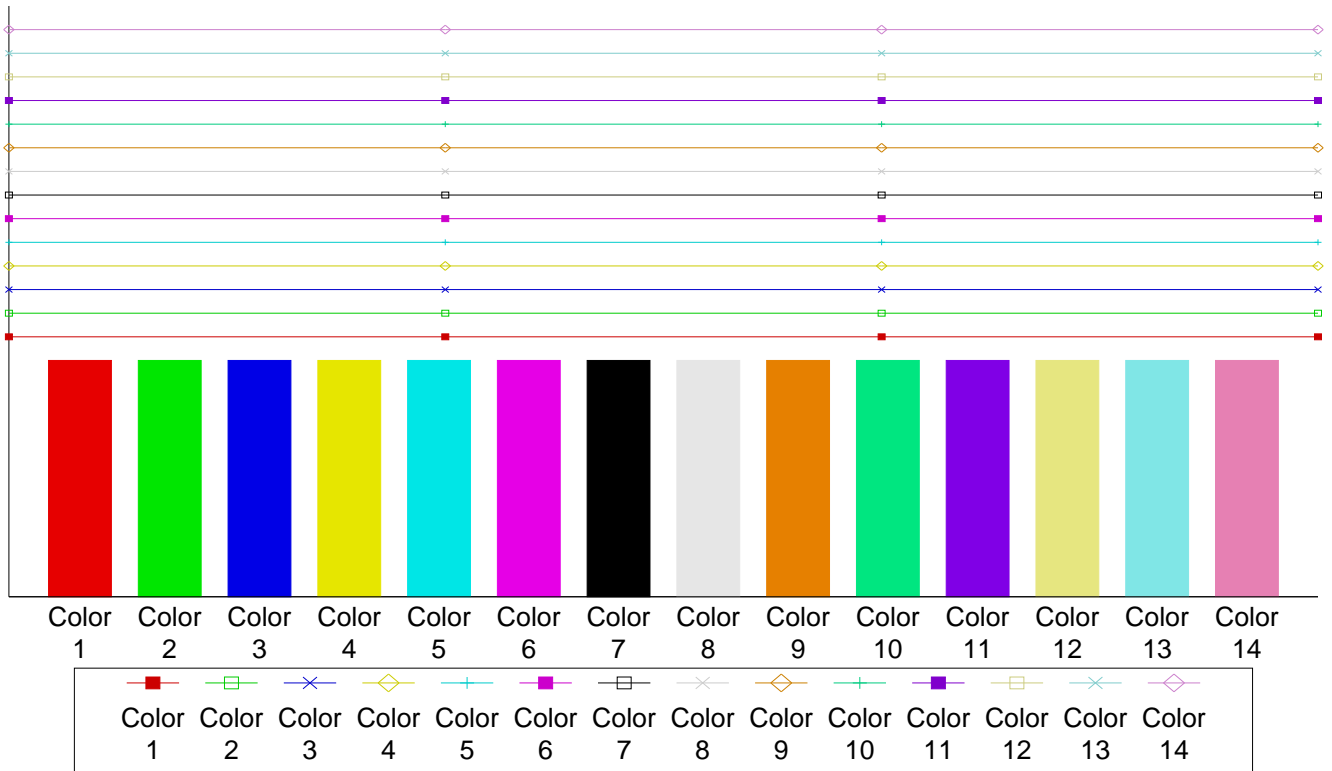
Number of Days Below Zero by Month



Pie Colors



Bar/Line Colors



Click on a command to jump to the page containing that command

[CHART](#)

[CHARTLINECOLOR](#)

[CHART3D](#)

[CHARTLINENODE](#)

[CHARTBARCOLOR](#)

[CHARTPIEOFFSET](#)

[CHARTBARDATA](#)

[CHARTPOS](#)

[CHARTBARMARGIN](#)

[CHARTTITLE](#)

[CHARTBARSPACE](#)

[CHARTTITLEFONT](#)

[CHARTDATALAB](#)

[CHARTXGRID](#)

[CHARTDATALINE](#)

[CHARTXLAB](#)

[CHARTDATAMLAB](#)

[CHARTXSCALE](#)

[CHARTDATAMULT](#)

[CHARTYAXISLAB](#)

[CHARTDOTSIZE](#)

[CHARTYGRID](#)

[CHARTEND](#)

[CHARTYLAB](#)

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