Graphs and Charts

I) Bar plot

→ barplot ( )

→ we can supply a vector or matrix as I/P.

→ If we supplay a vector, the plot will have bars with their heights equal to the elests, in the vector.

Eg: temp = c (27,26,23,24,26,28,25).

barplot (temp)

main - heading

xlab - x axis name

ylab - y axis name

name.arg - name of each bar.

col - colour name of bar.

horiz - horizontal graph. (horiz = TRUE).

density - shading. (density = 10)

border - bar border colour.

Pie Chart

Function = pie(x)

Eg:
$$x = c(1,1,1,2,2,3,3,4,4,4)$$
$$y = table(x)$$
$$pie(y).$$

* main :- heading.

> pie(y, main = "First")

* x - input values.

* lables - to give labels names for slides.

* edges - circular o/p of pie is approximated
    by a polygon with many edges
    [default : 200]

* radius : to change radius, default = 0.8
    max = 1.

* clockwise - to label in clockwise direction.
    (clockwise = T).

* density - to shade pie

Eg: density = c(10,20,30,40) → different

shading each slide.

* col - to give colours.

col = rainbow(15).

* border - to give border.

border = F.

→ we can make 3D by installing plotrix.

Eg: pie 3D(Y).

> pie 3D (y, explode = 0.2)

It makes the pie chart into pieces.

Histograms

```
x = c(1,1,1,1,1,2,2,2,2,3,3,3,4,4)
y = table(x)
> y
> x
    1  2  3  4
    5  4  3  2
> hist(x)
```

To see grouping,

```
> cut(x,6)
```

* main - heading.
* xlab - x axis name.
* ylab - y axis name.
* x lims - x limsit.
* y lims - y limsit.
* col - colour.
* density - shading density, c = (20,30,40).

* freq - get the probability distribution instead of frequency.

  freq = FALSE.

* las - to show the limits values horizontally

  las = TRUE.

* border - to set border.

  border = F.

* breaks - no. of cells we want, place where the breaks occur.

* counts : no. of observations falling in that cell.

Slatter Plot

```
>  plot (c(5,6,7,8,9))

>  x = 1:5
>  y = 6:10
>  plot(x,y)
```

* Main - heading
* x lab -
* y lab -
* col - colour.
* type - 'p' for points.
        'l' for lines.
        'b' both line & points.
        'c' for lines part alone of b.
        'o' over plotted.
        'h' for histograms.
        's' for stair.
        'n' no ploting.

Box Plot

→ quantitative data ploting.

→ function = boxplot.

Eg: boxplot (airquality $ ozone)

* main

* xlab

* ylab

* col

* notch - notch in the plot, notch = T.

* horizontal : display box plot horizontally.
horizontal = T.

=====

Multiple box plot ;

> O2 = airquality $ozone

> temp = airquality $ temp

> wind = airquality $ wind.

> boxplot (O2, temp, wind)

* varwidth : changes the box width, varwidth = 1.

* border : It changes border colour.