Module 5

Graphs and charts

1) Barplot

- barplot()
- we can supply a vector or matrix as I/P
- If we supply a vector the plot will have bars with their heights equal to the elmts in the vector.

eg: temp: c(27, 26, 23, 24, 26, 28, 25)

barplot(temp)

Min - Heading
xlab: x axis name
ylab: y axis name
name.arg: name of each bar
col - color name of bar
horiz - horizontal graph (horiz = TRUE)
density - shading (density = 10)
border - bar border color

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 value.
- labels - to give labels name for slices
- 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) ->

  diff. shading each slice
- col - to give colors

  col = rainbow (50)
- borders - to give borders

  borders = F
- We can make 3D by installing plotrix

  eg: pie3D (y)

  it make the pie chart into pieces.

Histogram

Quantitative data plotting.

x = c(1, 1, 1, 1, 1, 2, 2, 2, 2, 3, 3, 3, 4, 4)

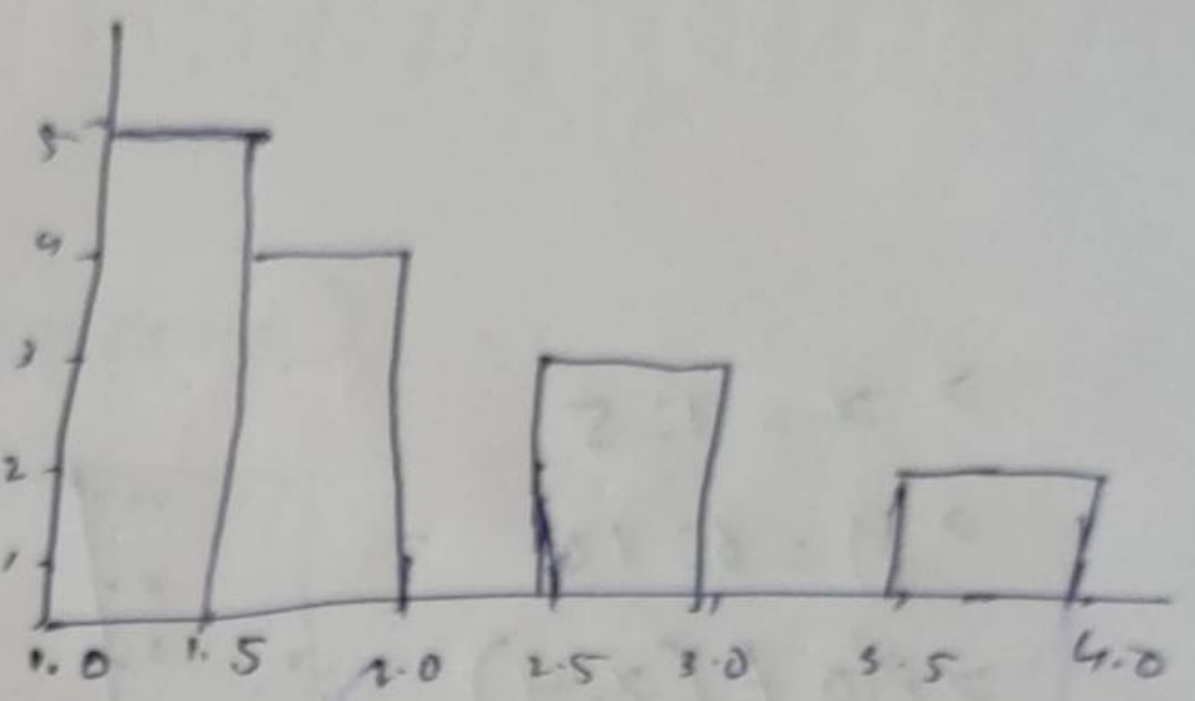
y = table(x)

> y

> x

1 2 3 4

5 4 3 2



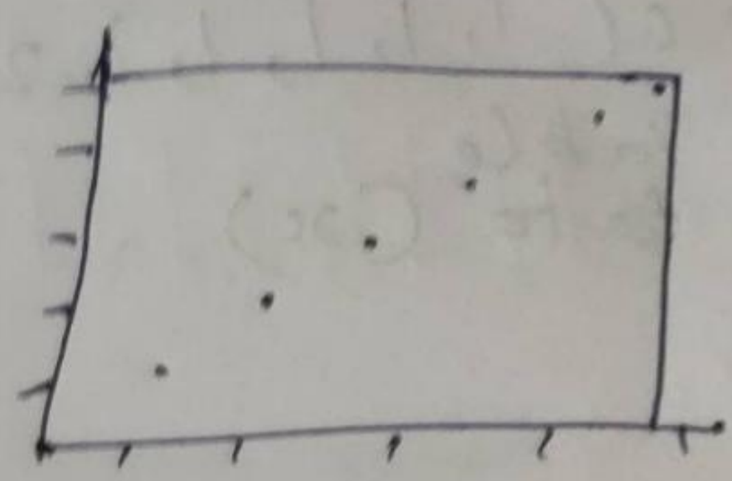
To see grouping:

> cut (x, b)

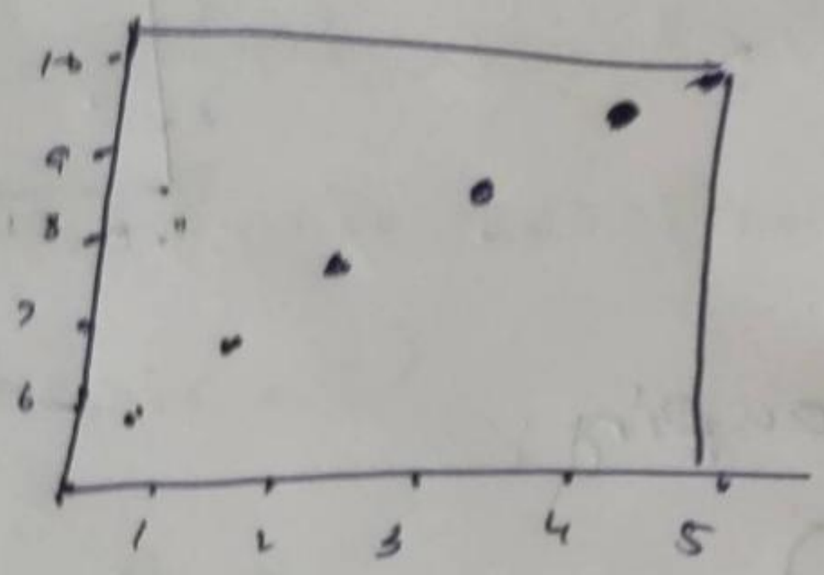
- main - heading
- xlab - x axis name
- ylab - y axis name
- xlim - x limit
- ylim - y limit
- col - colour.
- density - shading. density = c(20, 30, 40)
- freq - get the probability distribution instead of freq
- las - to show the limit values horizontal
- borders - set borders
  borders = F
- breaks - no. of cells we want.
  - place where the break occur
- counts - no: of observations falling in that cell

Scatter plot

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



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

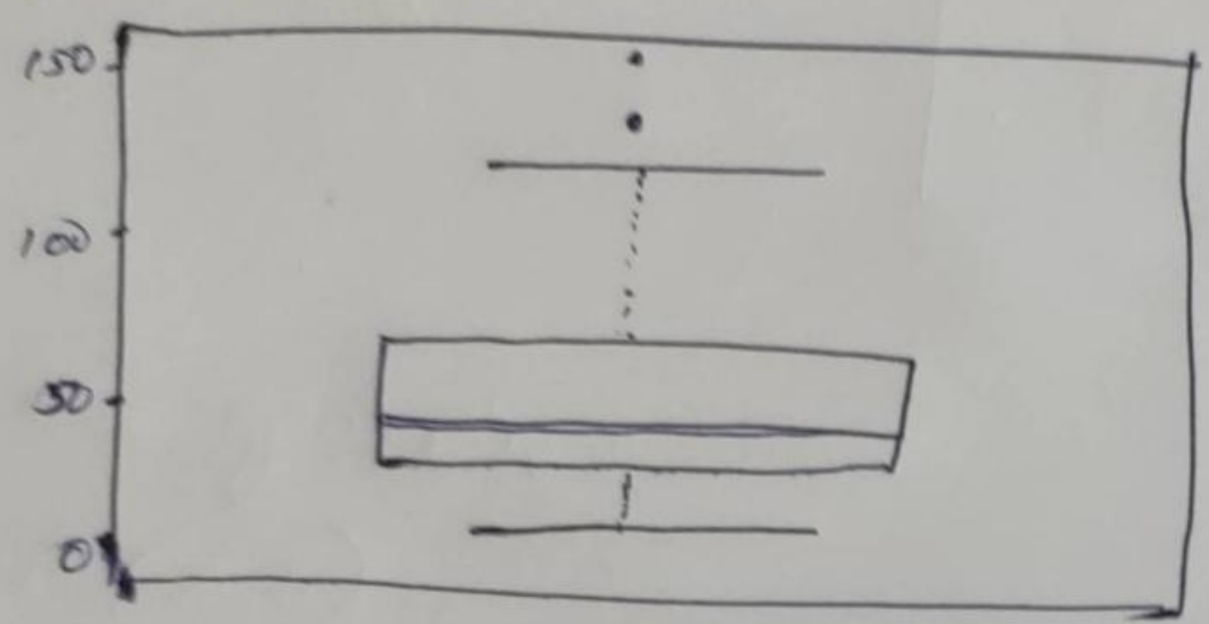


- Main - heading
- x lab
- y lab
- col - color
- type - 'p' for points
  'l' for line
  'b' both line & point —.—
  'c' for line part alone of 'b'
  'o' over plotted —
  'h' for histogram
  's' for stair
  'S' "
  'n' no plotting

Box plot

- quantitative data plotting
- function - box plot
- Example:

> boxplot (airquality $ ozone)



* Main
- xlab :
- ylab :
- col :

- notch - notch in the plot - notch = T
- horizontal :- horizontal = T
display box plot horizontally

multiple box plot:

> OZ = airquality $ Ozone
> temp = airquality $ temp
> wind = airquality $ wind
> boxplot (OZ, temp, wind)

- Varwidth:
- change the box width