April 19, 2010

- Small tip for managing the experimental data
  - Reading the text file for plotting the 2-dimensional graph
  - Fitting the experimental data into a user-defined function

How to plot the discrete function

- Define the function in the different regime
  - f(x):=if x<0 then x^2 else x−1;
    plot2d(f(x),[x,−2,2]);

- Clear the contents of the variables
  - remvalue(all); remove all variables
  - remvalue(x); remove the contents of variable x

How to plot 2-dim plots

- From the text file
  - Enclose the number table by the following commands in the text file ($myvalue : you are assigning the variable, **myvalue**.)

    (setf $myvalue '((mlist)

    10 20

    30 40

    ))
  - Load the text file > load("c:/work/data.txt");

How to plot 2-dim plots

- Experimental data
  - Conversion of the data in an array form
    makelist([part(mydata,2*i-1),part(mydata,2*i)],i,1,length(mydata)/2];
  - or Configure the option of plot2d function
    m:[[10,.6],[20,.9],[30,1.1],[40,1.3],[50,1.4]]$
    plot2d([[discrete,m],2*%pi*sqrt(l/980)],[l,0,50],[style,[points],[lines]]);
  - Fitting the data
    datax:makelist(part(mydata,2*i-1),i,1,length(mydata)/2

How to plot 2-dim plots

- Experimental data & Fitting
  - Fitting the data

    datax:makelist(part(mydata,2*i-1),i,1,length(mydata)/2);

    datay:makelist(part(mydata,2*i),i,1,length(mydata)/2);

    m:trasnpose(matrix(datax,datay));

    load(lsquares)$

    lsquares_estimates(m,[x,y],y=A*x+B,[A,B]);