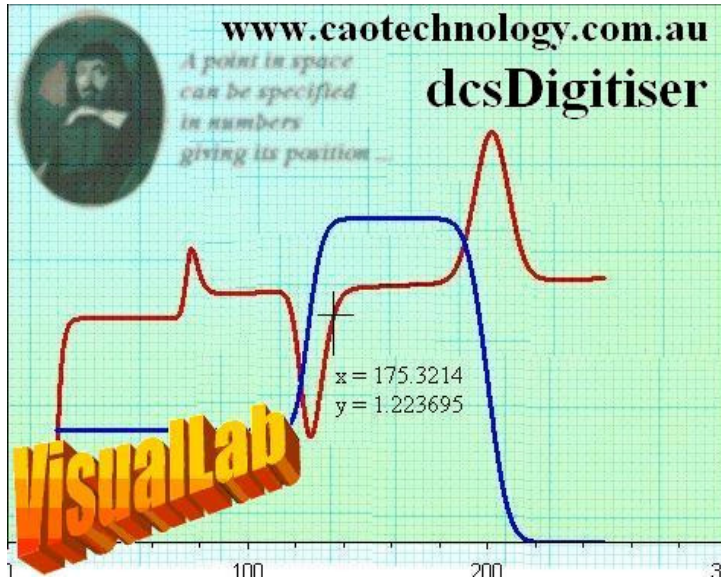# Smartest calculator — VisualLab

"**VisualLab**" is a format-free (syntax-free) math software that makes computations of maths easier than ever! Type your equations as in a notebook; **VisualLab** knows how to compute. No training is needed – it is visual. Making one more able and more efficient, VisualLab covers most math needs in science, engineering and statistics: e.g.

Matrices and linear eqns;   Complex numbers;
Probability and Statistics;   Equation solving;
Differentiation;   Differential equations;
Equation plotting;   Transcendental eqns;
Curve fitting;   Curve digitization;
and more and more …

Write eqns as in a notebook; VisualLab does all.

Format-free, syntax-free, VisualLab is smart.

VisualLab calculates simultaneous nonlinear eqns.

VisualLab calculates linear eqns, sum of seq's.

These two figures show how to eqn computation, and how to show plots of the equations.

When btn "Plot" is clicked, three curves for three corresponding equations are displayed.
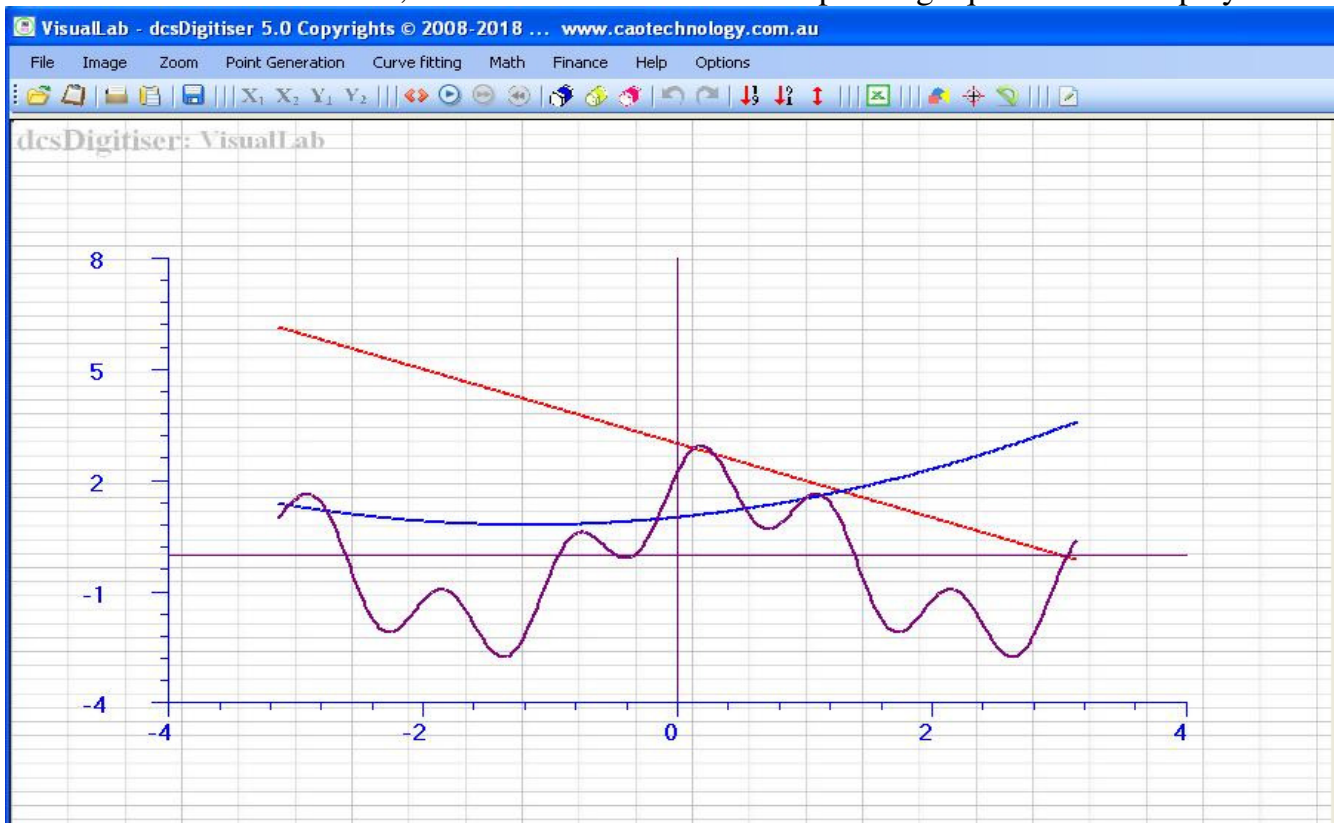
Freely write several quadratic and linear equations; a click to see the plots.
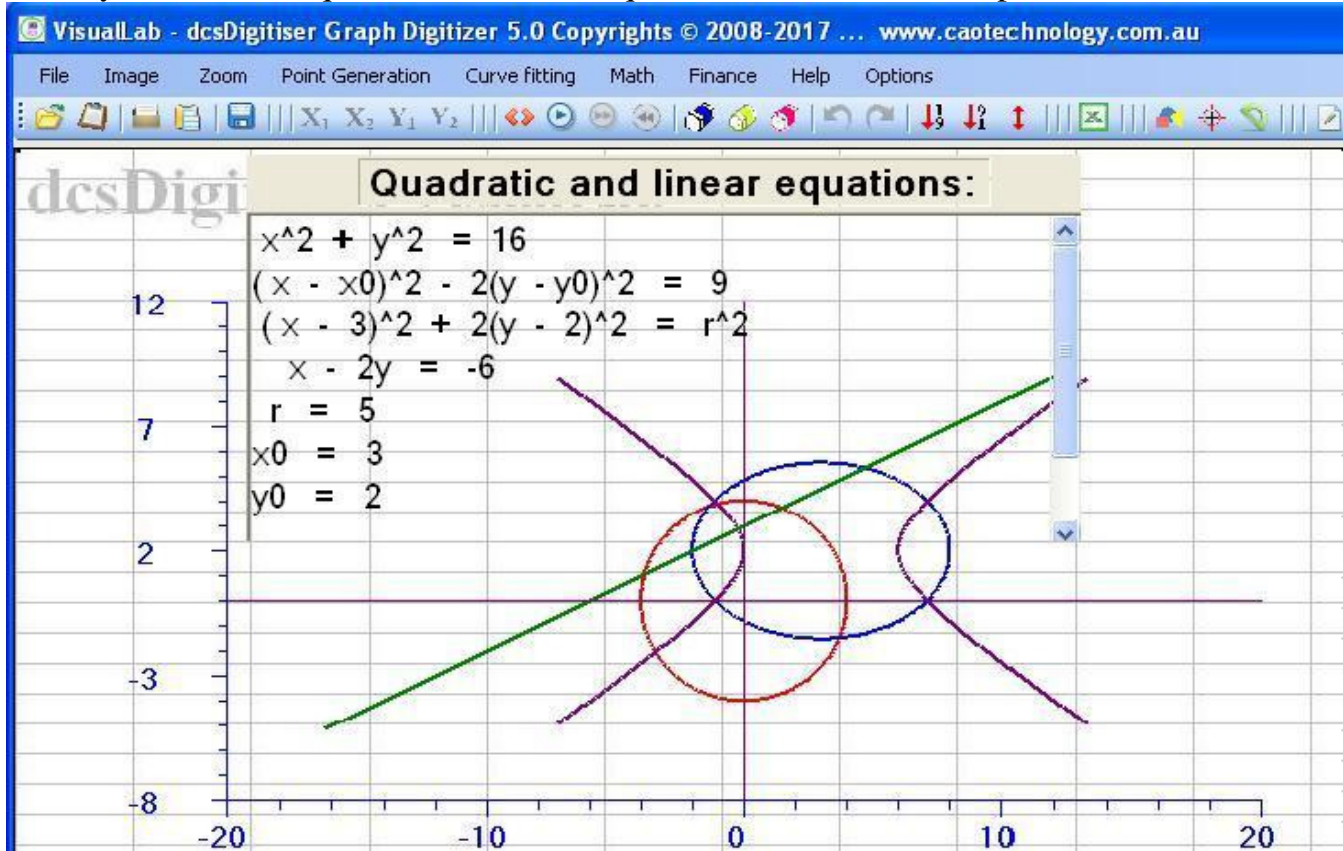
VisualLab makes matrix computations and solve linear equations, easy and straightforward.
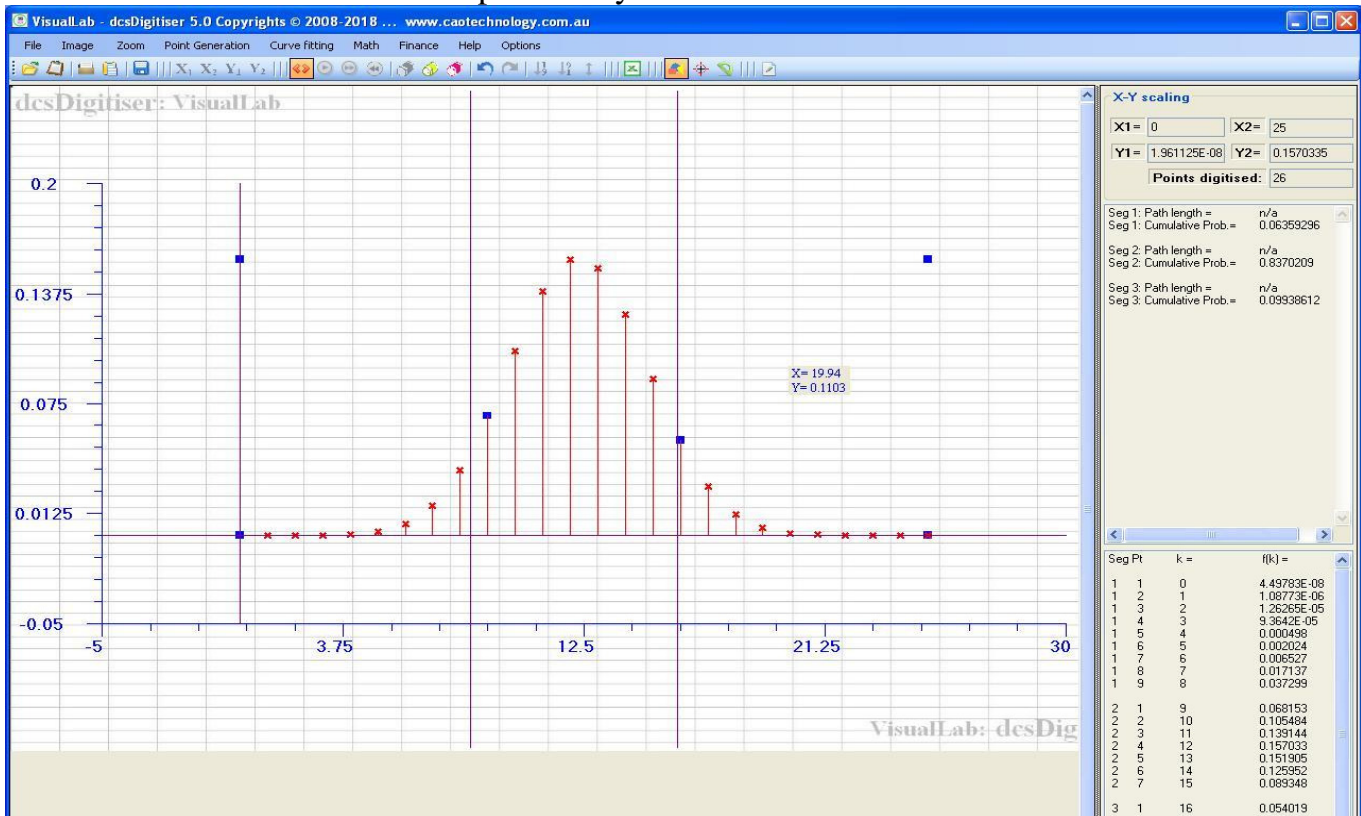
VisualLab integrates area size to compute probability value for the Gaussian distribution curve.
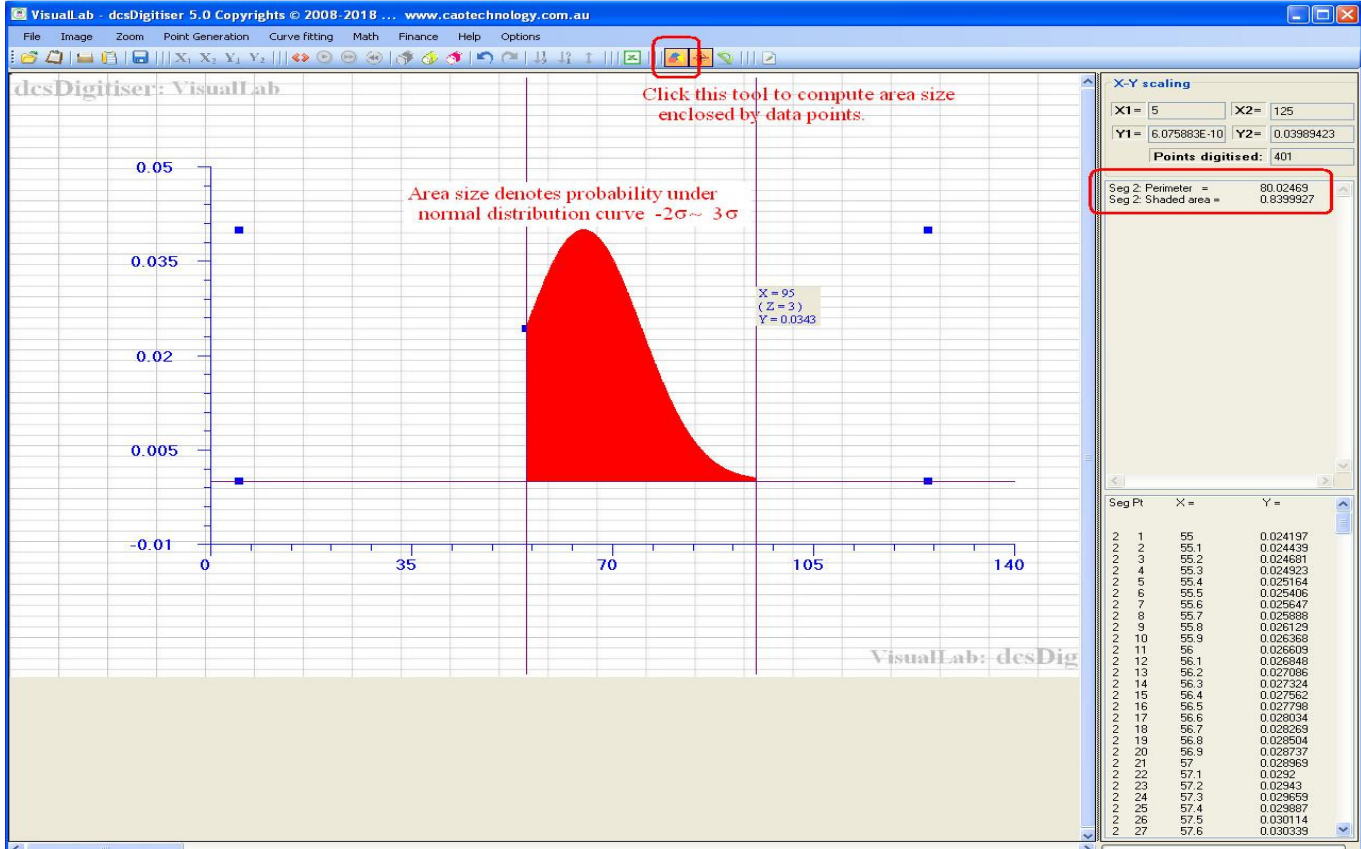
VisualLab calculate cumulative probability value for a binominal distribution model.

An example how VisualLab solves a second order ordinary differential equation.
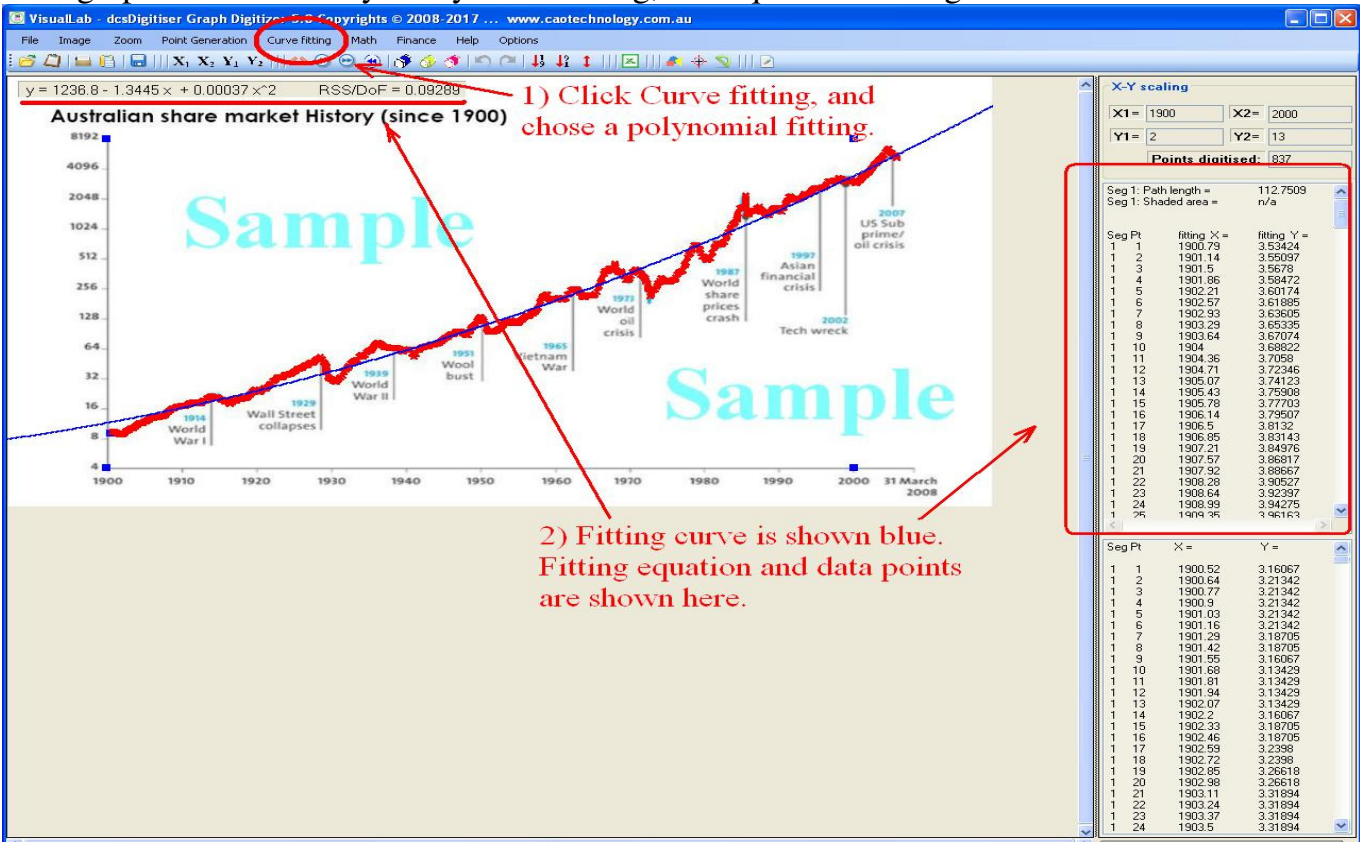

When the btn "Plot" is clicked, plots of x and dx.dt vs time t are shown.
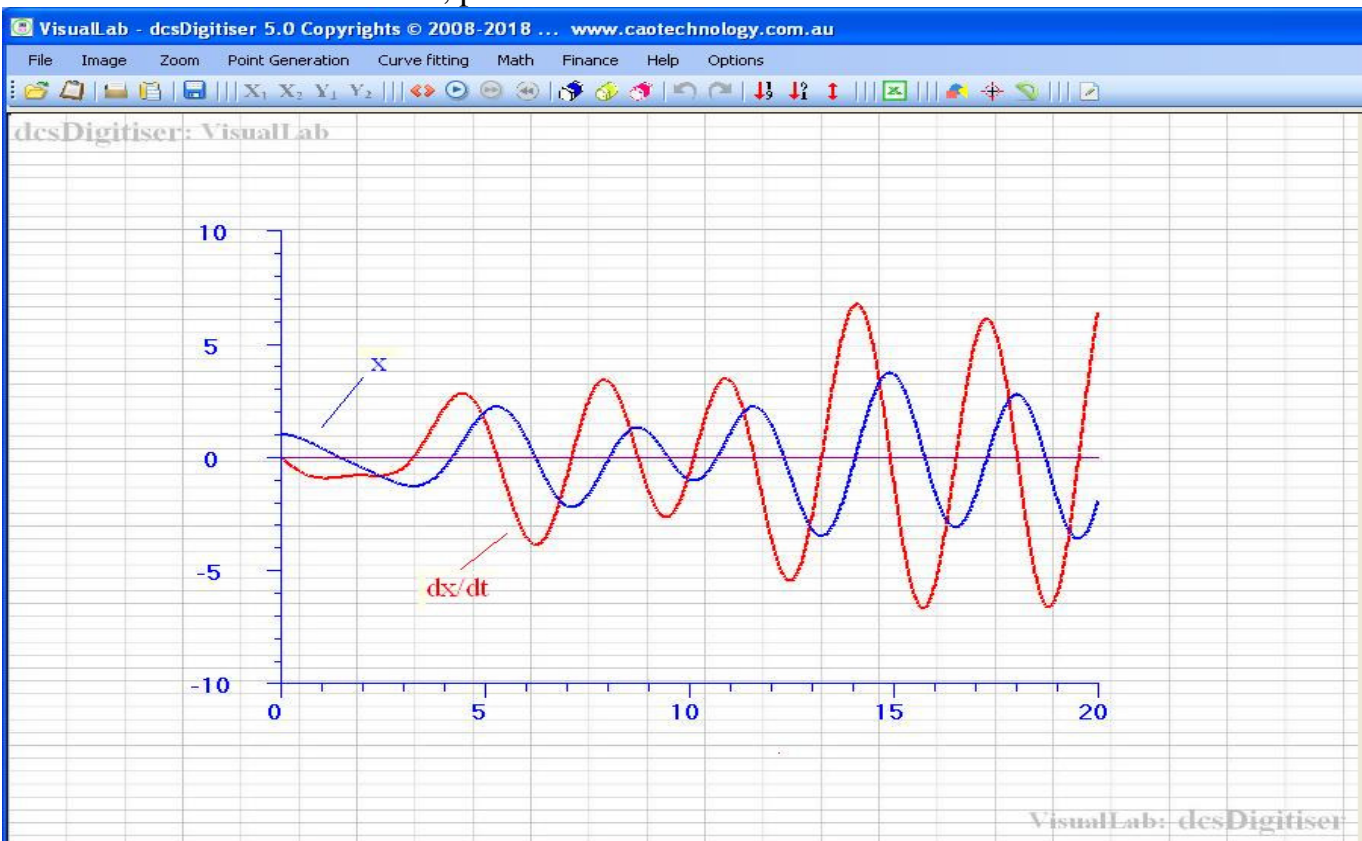
A graph is copy-pasted from a PDF image; x-y numbers of the graph are digitised in a second.
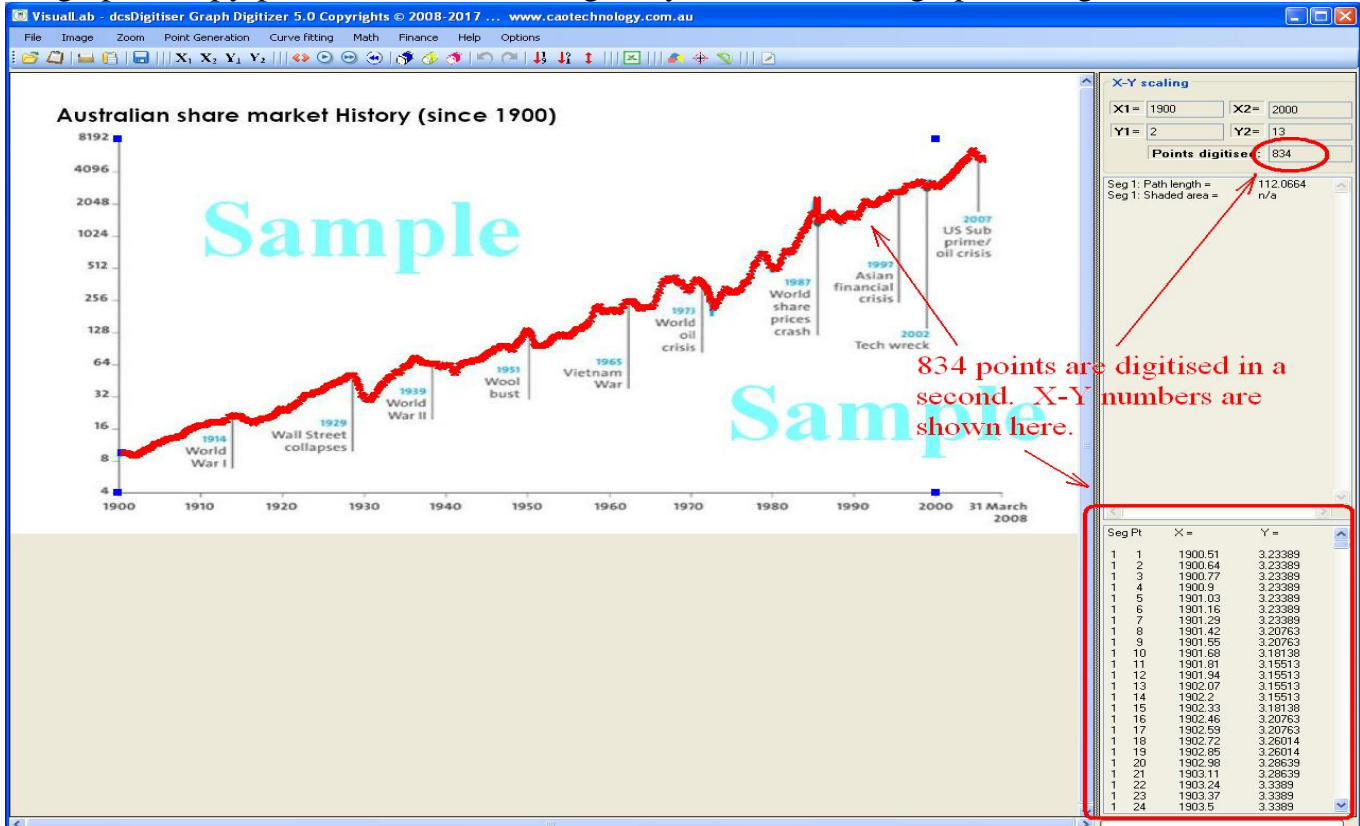
The graph is further analysed by curve fitting, and eqn of the fitting curve is obtained.

Statistical analysis can be carried out for any data set shown on the screen. For example, one has 10 data points in a file, input the data set to VisualLab; you'll see your data looking like:
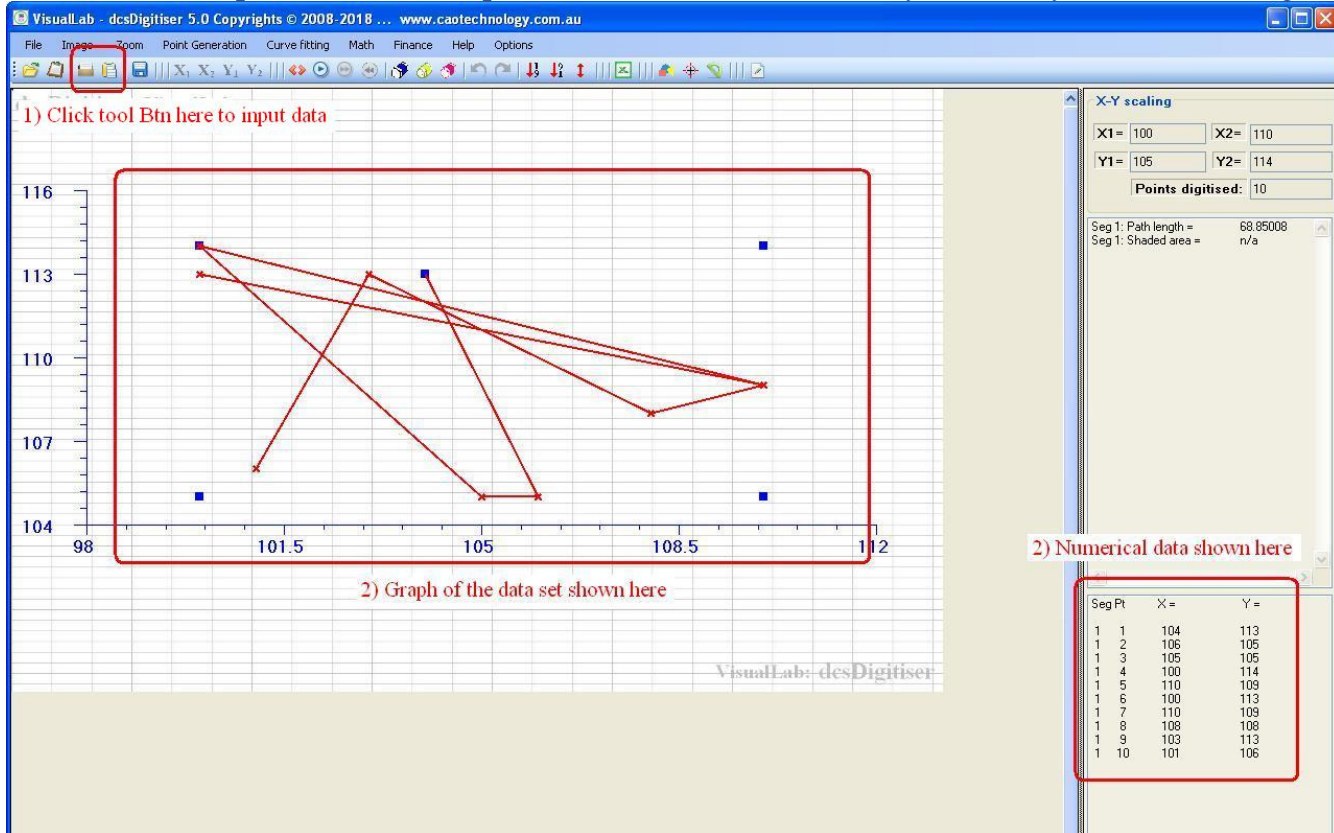
Go to menu Maths > t- test…, and chose unpaired two sample test; results are shown as follows:
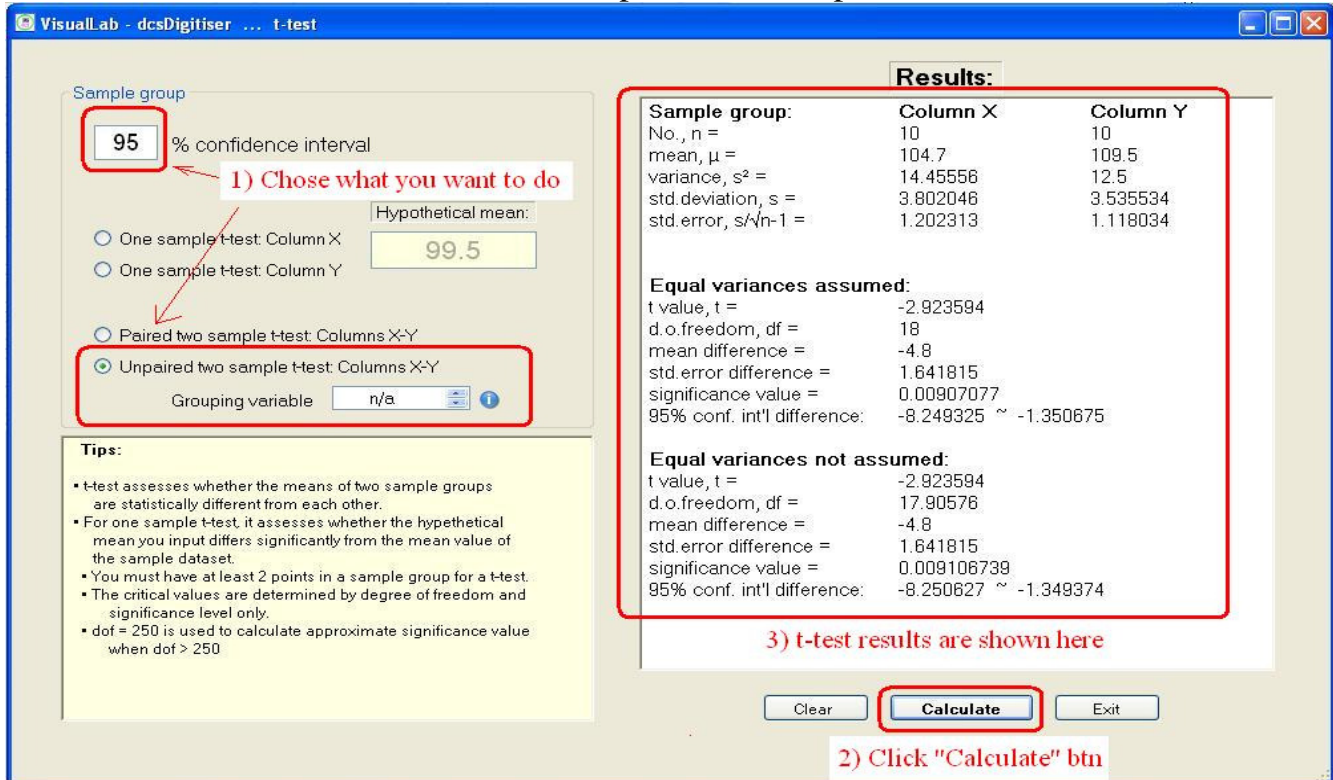
Maths > chi-square test enables one to perform chi-square test. An example is shown below:

Maths > ANOVA … An example showing how two way ANOVA is carried out in VisualLab.