Direction Fields -**dfield6**

- The routine **dfield6** is already loaded on all PUCC machines as standard software. To access it from any PUCC machine:

  `Start`→`All Programs`→`Standard Software`→`Computational Packages`→`MATLAB6.1`→`MATLAB6.1`

  If you are using your own copy of MATLAB you may need to download **dfield6**. Here is a link :

  ## http://math.rice.edu/∼dfield/

  (Note: **dfield** and **dfield5** are older versions of **dfield6**.)

- To access **dfield6**, at a MATLAB prompt type: **dfield6**

- A popup window will appear:

- Correctly enter your differential equation and enter the range of values of the independent and dependent variables. Hit **Proceed** and a graphics window will appear with the direction field of your differential equation. Click the mouse at any point and the corresponding solution curve through that point will be plotted.

- There are several options available in the graphics display window : printing, keyboard input of initial conditions, inserting text, erasing solutions, zoom, etc.

- You may have up to two parameters to quickly vary your differential equation (rather than retyping the whole differential equation with a different constant). For example, if you wanted to see the slope fields for $y' = At + By^2$ for the values $A = 0, 1, 2$ and $B = -0.1, 0.0, 0.1$, you only need to type in one equation and simply vary the parameters A and B in the indicated boxes.