Goal Seek and Simple Macros

This next example will illustrate how to record a simple macro that calls Excel's "Goal Seek" function and call the macro by selecting a button.

Step 1. Rehearse the steps you want to record in the macro.
- select "Tools / Goal Seek…"

- Type in the name of the cell you want to reach the goal (here we are telling Excel to set the sum of horizontal forces (C + T) to zero.
Tip: by typing cell names in the Goal Seek boxes you will be specifying absolute references which will still be valid even if you later add or subtract rows to your spreadsheet.

- Type in the value you want the cell to be set to (zero for this example) and the name of the cell you want Excel to change (yt in this example).

Caution: Goal Seek occasionally will not work (e.g. if the function decreases in a direction that never crosses zero.)

You can many times get a solution by specifying a starting point (yt in this example) closer to the solution and rerunning Goal Seek.
Step 2. Record the macro.

- Select "Tools / Macro / Record New Macro…"
- Type a name into the dialog box when prompted for a macro name (e.g. "Find y_t").
- When you select "OK" the a little box will appear with a "Stop Recording" button on it.

- Every command you execute from this point will be recorded (that's why we rehearsed the sequence of commands). For this example, repeat the sequence of commands you entered for Step 1 (execute the Goal Seek to find the "yt" that sets "C + T" to zero). Select the "Stop Recording button" after you finish the goal seek procedure.

Step 3. Assign the macro to a button.

- From the "Forms" menu ( "View / Tool Bars / Forms" ) select "Button"

- Drag the curser in the shape of a rectangle to place the button.

- Select the name of the macro you just recorded in the "Assign Macro" dialog box.

- Left-click on the button, place the curser in the button label ( "Button 63" here ) and type a new label, e.g. "Find y_t".
Step 4. Test your button and macro.

- Type a value for \( y_t \) that you know is wrong.
  
  Tip: You can use "Conditional Formatting" to make "C + T" more visible when you do not yet have a solution. (See bottom of this page.)

- Select the button and make sure your "goal cell" is set to zero.

Conditional Formatting

- Select the cell you want to format ("C + T" in this example) and select "Format / Conditional Formatting".

- Specify the conditions for which you want Excel to change the formatting of the cell. In this example, we want "C + T" to change to bold red when it is > 1 or when it is < 1.