Lesson 11

Comparing Alternatives for Better Decisions

Learn how to:

- Use Goal Seek to find a mathematical answer
- Create scenarios to compare alternative situations
Lesson 11

Goal Seeking

- There are often times when we are clear about the end goal (such as have a profit of $15000 etc.), but are not clear on what it takes to achieve the goal
- Goal seeking is an effective way to decide the best way to seek a specific goal

Using Goal Seek

- Click on the cell where you want to achieve a target (such as income, or profit etc.)
- Click Goal Seek on the Tools menu
- In the “To Value” box define your goal such as $10000 etc.
- In the “By Changing Cell” box enter the cell which should be manipulated to achieve the goal.
- Click OK
  - That’s it. Excel would show you the revised numbers in the requested cell, to achieve the goal
Scenarios

- Goal seeking is fine when you have a specific question or target;
- But often, you want to be able to compare and evaluate multiple scenarios to decide which scenario is the best.
- You use the Scenario Manager to define various scenarios.

Creating Scenarios

- Before creating Scenarios, it is a good practice (not technically necessary) to name the cells to improve readability of the scenario summary.
  - (refer pages 177-178)
- Click Scenarios on the Tools menu, and then click Add.
- In the Add Scenario dialog box, type a Scenario name and define the cells which could be changed in the Scenario.
  - To define multiple cells click the first cell, and keep the CTRL (control) key pressed while you click the remaining cells.
- Contd…..
Creating Scenarios

- Click OK to get the Scenario Values dialog box
- Define values for your scenario fields (attributes) and click OK
- Click Add to create another scenario and repeat the process
- Once you have created all your scenarios you can
  - see how your scenarios impact your worksheet
    - click on any scenario and click Show. The values in the worksheet are changed to reflect your scenario
  - or instead of seeing one scenario at a time, you can get a summary of all scenarios
    - click on Summary in the Scenario Manager dialog box
    - Ensure that in the Result Cells box you have the cell(s) related to your overall goal and click OK

Summary

- If your typical equation is of the form
  \[ X = a + b + c \text{ etc} \]
  - \( X \) is called the dependent variable
  - \( a, b, c \) are the independent variables which together decide the value of the dependent variable
- In Goal Seeking you define the dependent variable and let Excel compute the independent variable for you
- In Scenarios, you manipulate the independent variables, and let Excel summarize for you, how your manipulations are impacting the dependent variable