

# Lesson 11

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## Lesson 11

### Comparing Alternatives for Better Decisions

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## Learn how to:

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

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## 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

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## 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

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## 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

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## 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.....

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## 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 you 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 over all goal and click OK

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## 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

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