Excel Goal Seek Function

- goal seek are part of a suite of commands sometimes called what-if analysis.
- goal seek uses a process of changing the values in cells to see how those changes affect the outcome of formulas on the worksheet.
- the command uses iteration in a controlled way to obtain desired results.
- you can use goal seek when you know the desired result of a single formula but not the input value the formula needs to determine the result.

Excel Goal Seek Function

- To understand how goal seek works and how you might apply this function, consider the following problem
- we will use goal seek to find a number to make the sum equal to 100:
  - B2 = 25; B3 = 40; B4 = SUM(B2:B3)
- on the data tab, in the data tools group, click what-if analysis, and then click goal seek.

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- In goal seek: set cell: click on B4; to value: enter 100; by changing cell: click on B3
- The sum in B4 should now be 100, and the value in cell B3 should be 75

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- Click on the set cell box and select cell B4

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- Click on the to value box and enter the desired value, in this case 100
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- Click on the "By changing cell" box and enter the cell you want Goal Seek to change, in this example cell B3.

- Next, click the OK button on the Goal Seek dialog box to run Goal Seek.

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- The results of Goal Seek will display in the worksheet and the Goal Seek Status window will appear.

Excel Goal Seek Function

- Troubleshooting a Goal Seek
  - Make sure the Set cell reference is to a cell that contains a formula, function, or cell reference.
  - Make sure the To value cell value is a reasonable value.
  - Make sure the By changing cell reference is a number or blank, and not a formula, function, or cell reference.
  - Make sure there is a link by formulas between the two cells you entered in the Goal Seek.
  - However complicated the link might be, they must be related for the Set cell to be a function of the By changing cell.

Excel Goal Seek Function

- Could we use the Goal Seek function to solve root finding problems?
  - How would you formulate this problem?

\[ f(x) = 0 \]

- What would be the Set cell reference?
- What would be the To value cell value?
- What would be the By changing cell reference?

Excel Logical Functions

Questions?