Introduction to Excel 2007
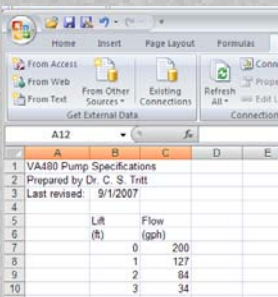
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Introduction

- Engineers and nurses often use spreadsheets to perform routine calculations and produce simple plots.
- Excel is Microsoft's popular spreadsheet and the one we use at MSOE.
- All spreadsheet programs are pretty much the same.

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Sample Spreadsheet

Numbers or text can be entered into "cells."

3

Entering Equations

Contents of cell E7

Equations should start with ='s and may contain "references" to other cells.

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Equation Details

- Equations can contain numerical values, mathematical operations, cell references and special functions.
- Cell references generally consist of column letter and row number values.
- By default reference are "relative" but can be made absolute by pressing F4 or putting $'s in front of coordinates.

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Formatting Cells

- Engineers care about the number of digits displayed in values. The convention is that there is uncertainty in the right most digit.
- The digits shown (including the uncertain one) are called *significant*.
- To adjust the number of digits displayed (and align decimal points) in Excel, select the cells, right click and selection *Format cell... | Number*

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Formatted Cells

"Scientific Format"

7

Producing Plots

Pre-selected Columns

8

Plot Steps

- Select Columns.
- Select Insert tab and Scatter in the Chart group.
- I put each plot on *a new sheet* (use the move chart button).
- Tidy-up the plot by select items (double clicking on them) and changing their properties.

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Tidying Tasks

- Remove legend (since there is only one data series).
- Select and right click on the x (horizontal) axis and specify Major Gridlines.
- Specify axis titles with units (and sometimes a chart title) using the Layout tab that appears when a chart is selected.
- Add initials and date using Insert | Text Box.
- Adjust Data Series Format (appearance)

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Chart Tools Tabs

11

Finished Chart

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