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# **Announcements**

- ❖ Check your grades online
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# Spreadsheets

- Application Software designed to aid users in entering, moving, copying, labeling, displaying and calculating numbers (in a tabular format)
- Each table called
  - spreadsheet
  - worksheet
    - collection of worksheets = a workbook
- Examples
  - Microsoft Excel
  - Quatro Pro
  - Lotus 1-2-3
  - sc (spreadsheet calculator) on the UNIX system

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# Entering Values

- Type in
  - formula bar
  - cell
- From an ASCII text file
  - Format Required
    - identifiable columns
    - standard width or delimiter (marker) between fields

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# Basic Elements

- Spreadsheets elements
  - Columns
  - Rows
  - Cells (intersection of numbered row and column)
- Each cell can have
  - constants – 10.2
  - text – (e.g., “Joseph Smith”)
  - formulas - =10/2

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# Basic Elements

- We will use Excel as our spreadsheet program
- **Example1.xls(Sheet1)**
  - Cells referred to by letter followed by number
  - Notice the automatic recalculation feature
- Standard math operations (+,-,/,\*) available in spreadsheet programs
- Blocks of cells
  - To select several cells use commas
    - A6, A9, A7
  - To select a range of cells use :
    - A6:A9

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# Formulas

- ❑ Over 330 predefined formulas in Microsoft Excel
- ❑ Common formulas (notice case is irrelevant)
  - Sum – `sum(A6:A9)`
  - Max – `max(A6,A8)`
  - Min – `min(A6,A8)`
- ❑ Function Wizard
- ❑ IF formula
  - Syntax: `IF(cond, value if cond is true, value if cond false)`
- ❑ Example 1
  - `IF(A7<10, "Small Class", "Large Class")`
- ❑ Example 2 (Nested)
  - `=IF(A7<10,"Small Class",IF(A7<50,"Medium Size Class","Large Class"))`

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# Relative vs. Absolute Cell Addressing

- To see what relative vs. absolute cell addressing means let's try to copy some of the cells we have created.
  - Copying a numeric value
  - Copying a formula – cells information is copy relative to its position
- Absolute address
  - A cell reference can be defined as absolute by preceding row and column values with a \$
  - You can fix the row, column or both.

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# Web Resources

- General research
  - <http://lib.stat.cmu.edu/DASL/>
  - some just raw data others graphed
- Movie Data
  - <http://us.imdb.com>
  - some voting statistics on movies

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# Formatting

- ❑ Inserting rows/columns
- ❑ Column width change
  - Choose Column
  - Using Menu→Format→Column→Width
- ❑ Formatting Numbers
  - Select values
  - Choose Format→Cells→Number
  - Other options
- ❑ Formatting Currency
  - Select Values
  - Choose Format→Cells→Number→Currency
- ❑ Difference between format and value
- ❑ Formatting Date and Time
  - Select Values
  - Choose Format→Cells→Number→Date

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# Charts (Pie Chart)

- ❑ (Data in **Example2.xls**)
- ❑ Altering the basic type
- ❑ Tagging/formatting your pie chart
  - Right-Click→Format Data Series→Data Labels
  - Right-Click→Format Data Series→Options
- ❑ Legend
  - Right-Click→Source Data→Series