# Open Office Spreadsheets: Intermediate
## common formulas, sorting, and filtering

**Uses for Open Office Spreadsheets:**
- expenses
- budgets
- data to be analyzed, summarized, or graphed

**Terminology**
- worksheet = one page within a file (like a piece of paper in a ledger)
- workbook = an entire file (like a ledger)
- cell = location of one piece of data
- row = horizontal series of cells designated by a number
- column = vertical series of cells designated by a letter
- cell reference = location of a cell described by the intersection of a column and row (letter then number) (ex: A1)
- formula = math problem
- formula bar = displays data or formula within a selected cell (located at the top of the worksheet)

**Sorting**
- Sorting data changes the order of the data, not the data itself.
- When sorting, rows of information are kept together.
- Sort data as follows.
  - Open the Data menu.
  - Click on Sort.
  - The file is assumed to have headers.
  - Choose a column to Sort by.
  - Choose a second column under "Then by" to sort further.

**Filtering**
- Open the Data menu.
- Click on Filter and then "Auto-Filter."
- Click on an arrow next to a column header to filter.
- Select an option to filter.
- To create a custom filter, select "Standard Filter" and enter the required information into the dialog box which appears.
- Click on "All" in a list to remove the filter from the data in that column.

**Formulas**
- To enter a formula, select a cell for the answer and type the formula in the formula bar.
  - A formula always starts with an equals sign (=).
  - Numbers and cell references may be used within the formula.

- o Indicate multiplication with an asterisk (*) and division with a slash (/).
  - o After entering the formula, press Enter on the keyboard to display the result.
- The order of operations is followed within each formula. The order of operations dictates that functions are worked from left to right at each level starting at the top of the following list and progressing to the bottom.
  - o parentheses (from the inside out)
  - o exponents and roots
  - o multiplication and division
  - o addition and subtraction

## Common Formulas
- SUM is the most common formula.
  - o The result is the total of the numerical data in all of the referenced cells.
  - o The cell references are input as a range (ex: B2:B5).
- AVERAGE is also a common formula.
  - o The result is the total of the numerical data in all of the referenced cells divided by the number of cells within the range containing numerical data.
  - o The cell references are input as a range (ex: B2:B5).

## Open Office Spreadsheets Tips
- Save often.
- Sort and filter data to ease searching.
- Use common formulas with ranges of cells.
- Do not be afraid to ask for help.

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