

## Excel cheatsheet

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Here are some tips on basic operations for using a spreadsheet program, such as MS Excel,<sup>1</sup> for the purposes of economic analysis.

Basic terminology:

- Cell: the minimal “box” in a worksheet.
- Row: a horizontal array of cells. These are identified by positive integers: 1, 2, 3. . . .
- Column: a vertical array of cells. These are identified by letters: A, B, C, . . . .
- Formula: an expression entered into a cell which is evaluated to produce a value for that cell. E.g. the formula =B1+B2 produces a value equal to the sum of the values in cells B1 and B2.

Formula tips:

- Entering a formula into a cell: start the entry with the equals sign, =. To reference another cell within a formula, just click on that cell.
- By default, if you use a reference to (say) cell B2 within a formula, then when you copy the formula to other rows or columns the reference will shift, maintaining the same *relative* position. For example, a reference to B2 will turn into B3 if copied to the next row. Much of the time this is what you want, but if you want the reference to stay fixed (by row or column) you can achieve that by sticking in a dollar sign (\$). For example, a reference of B\$2 will point to row 2 of the worksheet, regardless of where it is copied to. A reference of \$B2 will point to column B, regardless of where it is copied to. You can probably figure out how a reference of \$B\$2 works.
- Having entering a formula in one cell, you can copy it to other cells in various ways. Here’s a neat way: move the cursor into the bottom right-hand corner of the cell containing the formula you want to copy—it should then turn into a thin cross-hair. Using that cross-hair, drag into other rows or columns and the formula will be copied into the corresponding cells.
- In a spreadsheet formula, your basic arithmetical operations are + (add), - (subtract), \* (multiply), / (divide), ^ (raise to a power). If need be, you can use parentheses () to group values—either fixed numerical values or cell references. E.g. =(B1+C1)/D1.
- If you want a cell’s content to start with =, but *not* be a formula, stick a single quote out front, e.g. '=total. The quote won’t be visible in the worksheet.

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<sup>1</sup>If you already have MS Excel on your computer, fine. If you don’t, there are good open-source (and free) alternatives, such as Gnumeric and LibreOffice (easily found using google). These can read and write files in Excel format, and are better than Microsoft’s proprietary product in some ways.