

Excel 2003 Formulas & Functions

This handout contains information about using formulas and functions in Excel 2003. For information about how to use the basic features of Excel 2003, see the handout *Getting Started with Excel 2003*, available at <http://www.snc.edu/techsupport>.

Spreadsheet Concepts

Cell Reference	A cell's location on the worksheet, e.g., the cell at the intersection of column A and row 4 is called cell A4 (the column heading comes first). By default, cell references are relative.
Relative Cell Reference	A relative cell reference is based on the relative position of the cell. If the position of the cell changes, all references to it are changed. If a formula containing a relative cell reference is copied across rows or down columns, the reference automatically adjusts.
Absolute (fixed) Cell Reference	An absolute cell reference always refer to a cell in a specific location. If the position of the cell changes, the absolute reference remains the same. If a formula containing an absolute cell reference is copied across rows or down columns, the reference does not adjust. By default, cell references are relative; you must explicitly specify absolute references. To specify an absolute reference, use dollar signs (\$) in front of the column and row, e.g., \$A\$4.
Formulas	Formulas perform calculations within a cell. All formulas in Excel begin with an equal sign (=). For example: =(b3+b4+b5) / 3
Functions	Functions are predefined formulas. Like formulas, all functions begin with an equal sign (=). For example: =average (1 , 2 , 3 , 4 , 5) will compute the average of the numbers 1, 2, 3, 4, and 5. =average (b3 : b5) will calculate the average of the range of cells from b3 through b5.
Range	A range is specified with a colon (:), and provides a quick mechanism for including all cells in an area. For example, the range b3:b8 means cells b3, b4, b5, b6, b7, and b8. The range a1:b2 means cells a1, a2, b1, and b2. Ranges are normally used in functions.

Tip: Use single quotes when numbers should appear as text (e.g., phone numbers, social security numbers, dates such as 2006-2007).

Common Operations in Excel 2003

Operation	Command
Average Function	<ol style="list-style-type: none"> 1. Click in the cell. 2. Type: =average (beginning cell:ending cell) 3. Press ENTER.
Cell Properties	<p>Properties contain information about a selection. For example, common properties of a cell include number of decimal places, font, font size, attributes (underlined, bold), alignment (centered or right-justified). To view and change properties:</p> <ol style="list-style-type: none"> 1. Click on the cell or click and drag over the cells you want to change. 2. Right-click and choose Format Cells. 3. Choose the desired formatting, then click OK.

Conditional Formatting	<ol style="list-style-type: none"> 1. Highlight the cells for the conditional formatting. 2. From the Format menu, choose Conditional Formatting. 3. The first drop-down box should say "Cell Value Is." 4. Select the appropriate comparison operator for the middle drop-down box. 5. Type a value or a formula or function in the last box. If you type a formula or function, it must start with an equal sign (=). 6. Click the Format button. 7. Choose the cell formatting you want to be applied when the condition you specified is true. You can change the font style/size, borders, or background. 8. Click OK.
Display values with dollar (\$) signs.	<ol style="list-style-type: none"> 1. Click in the cell or click and drag over several cells. 2. Right-click and choose Format Cells. 3. Click the Number tab. 4. Select Currency. 5. In the Symbol drop-down box, choose the dollar sign (\$). 6. Click OK.
Division	<p>The slash (/) is the division symbol. For example, to divide cell d11 by 5, type:</p> <p style="text-align: center;">=d11/5</p>
Multiplication	<p>The asterisk (*) is the multiplication symbol. For example, to multiply cell d11 by 1.06, type:</p> <p style="text-align: center;">=d11*1.06</p>
Ranges	<p>Ranges must be used in functions such as =sum() and =average(). To specify a range:</p> <ol style="list-style-type: none"> 1. Type the function name (e.g., =sum()). 2. Type the beginning cell reference (e.g., b2). 3. Type a colon (:). 4. Type the ending cell reference (e.g., b8). 5. Type a right parenthesis ()) and press ENTER. The completed function should look like this: <p style="text-align: center;">=sum(b2:b8)</p>
Sum Function (addition)	<ol style="list-style-type: none"> 1. Click in the cell. 2. Type: =sum(beginning cell:ending cell) 3. Press ENTER.

Assistance and Questions

If you have any questions or need more information, please call the Help Desk at (920) 403-HELP (4357), contact us via e-mail at helpdesk@snc.edu, or stop by the Help Desk in Cofrin 101. The Help Desk is for St. Norbert College students and employees only.