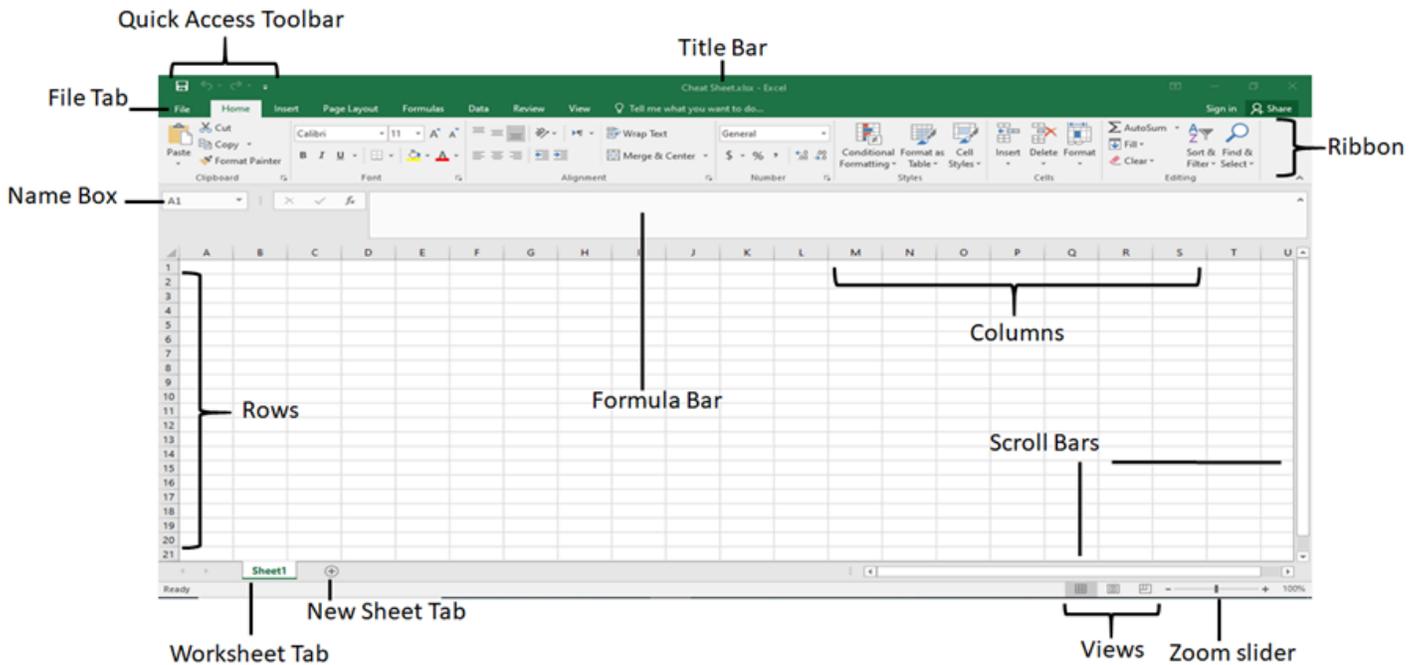
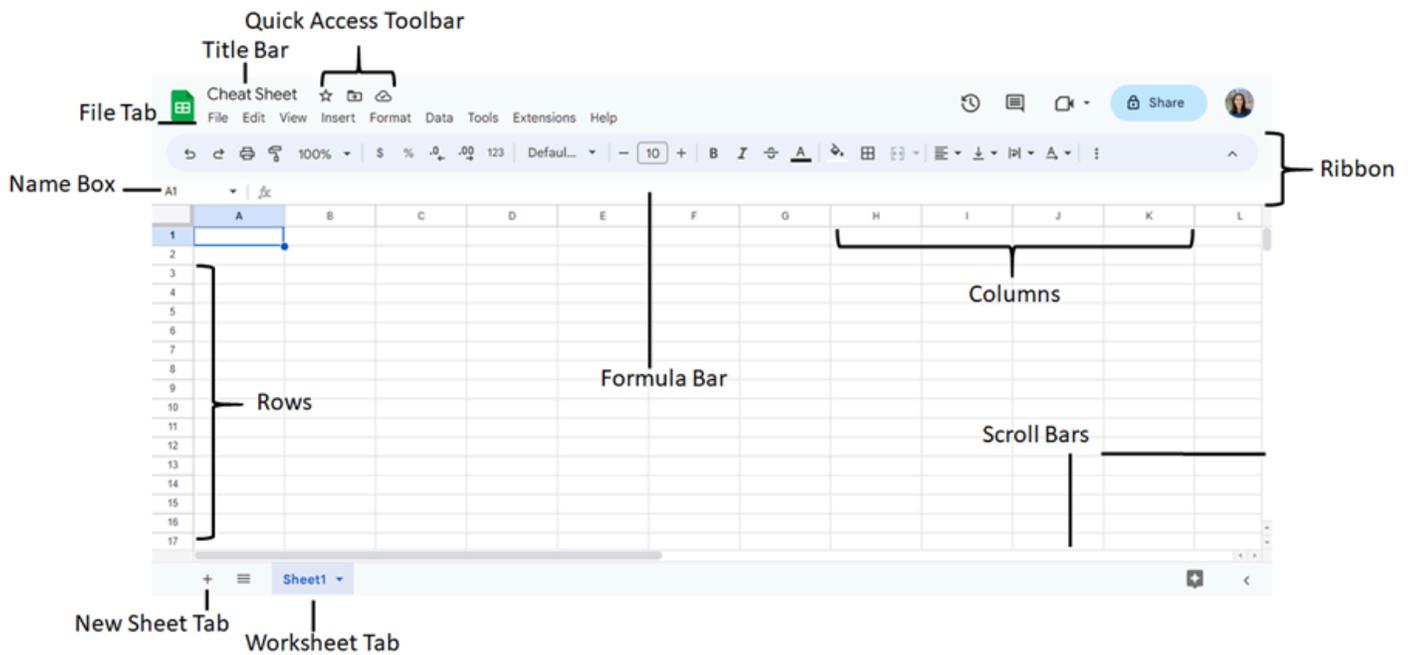


# Excel and Sheets - Student Cheatsheet

## Excel



## Google Sheets



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## Glossary

**Spreadsheet:** An application, like Microsoft Excel, where you can store data, perform calculations, and organize information.

**Workbook:** A file containing a collection of one or more worksheets.

**Worksheet:** A single page in a workbook. It is a grid of cells arranged in rows and columns.

**Cell:** A rectangular box in a worksheet that can store a data value, a formula, or other content.

**Formula:** A piece of code to perform a calculation. Formulas start with an equals sign (=), and contain **functions**, mathematical **operators**, **values**, and **cell references**.

Example **functions:** =AVERAGE, =SUM, etc.

Example **operators:** =A2 + A3 (Add) =A2 - A3 (Subtract) =A2 \* A3 (Multiply) =A2 / A3 (Divide)

=B1 ^ C1 (Raise a value to a power “= 10 ^ 5” is the same as “10<sup>5</sup>”)

**Cell reference:** The location of a cell. The column is described with letters and the row is described with numbers. For example, the cell in the 4th column, 7th row would be denoted D7.

**Cell range:** A group of adjacent cells in a worksheet. A cell range is typically referred to by its upper left and lower right cells, such as A1:C3, referring to the cells in columns A, B, and C and rows 1 through 3. You can use cell ranges to perform calculations on multiple cells at once or to apply formatting to a group of cells. For example: =SUM(B2,B5)

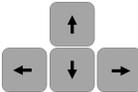
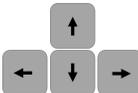
**Absolute Cell reference:** The \$ symbol before the column letter and/or row number tells Excel that the reference is absolute and should not change when the formula is copied or moved to another cell. For example:

=B\$2: Column and row references are both absolute Column reference is absolute

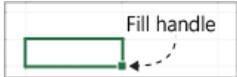
=\$B2: row reference is relative Column reference is relative

=B\$2: row reference is absolute

## Excel and Sheets - Student Cheatsheet

<b>Excel vs Sheets shortcut key</b>	<p>“Ctrl +” for (Windows, Chrome OS) is the same as “⌘ + “ for (Mac)</p>
<b>Download the spreadsheet</b>	<p>On your computer, open the Google Docs.</p> <p>At the top, click File and then Download.</p> <p>Choose a file type (for excel choose .x/sx), the file will download onto your computer.</p>
<b>Saving the spreadsheet</b>	<p><b>Excel:</b></p> <p>When you want to save the spreadsheet for the first time:</p> <p>Click File &gt; Save As</p> <p>Under Save As, Click Browse to find the location you want to save your workbook.</p> <p>In the File name box, enter a name for a new workbook.</p> <p>Click Save.</p> <p>When you want to save the spreadsheet after the first time, you can use the save button from the Quick Access Toolbar.</p> <p><b>Google Sheets:</b> When you're online, Google automatically saves your changes as you type. You don't need a save button.</p>
<b>Select a cell</b>	Click on a cell.
<b>Move between cells</b>	Click on a cell and use the arrow button to move around. 
<b>Select a cell range</b>	Click and drag to select a range of cells. (Shift &  )
	<p><b>**when you “select” a range of cells, your mouse pointer should be a white plus cursor: </b></p>
<b>Naming data range</b>	<p>Select the range you want to name, including the row or column labels.</p> <p>Click Formulas &gt; Define Name.</p> <p>In the Define Name box, add a Name which could be used in the formulas later. Click OK.</p> <p><b>** Selected name should not include any spaces. Instead use underscores.</b></p>
<b>Select the entire worksheet</b>	Ctrl & A (⌘ + A)
<b>Redo</b>	Click on the "Redo" button on the Quick Access Toolbar. (Ctrl & Y) (⌘ + Y)
<b>Undo</b>	Click on the "Undo" button on the Quick Access Toolbar. (Ctrl & Z) (⌘ + Z)

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<b>Cut</b>	Select the cells and click on "Cut" button on the Ribbon. (Ctrl & X) (⌘ + X)
<b>Copy</b>	Select the cells and click on "Copy" button on the Ribbon. (Ctrl & C) (⌘ + C)
<b>Paste</b>	Select the cells and click on "Paste" button on the Ribbon. (Ctrl & V) (⌘ + V). <i>**This option will paste the format of the copied cell as well. To paste only the values use "Paste Special"</i>
<b>Paste special (values only)</b>	In Excel - select the cells and click on "Paste" button then click the "Paste special" when it appears in the drop down menu. In Sheets - select the cells then to click (⌘ + shift + V)
<b>Drag a formula from one cell to other cells (using the fill handle)</b>	Select the cell that has the formula you want to fill into adjacent cells. Rest your cursor in the lower-right corner (fill handle) so that it turns into a plus sign (+) Drag the fill handle down, up, or across the cells that you want to fill. When you let go, the formula gets automatically filled to the other cells. 
<b>Find</b>	Click on the "Find & Select" button on the Ribbon. (Ctrl & F)
<b>Clear cells content</b>	Select the cells and click on Delete on the keyboard.
<b>Arithmetic operators</b>	=A2 + A3, Add two values with + =A4 - B4, Subtract a value from another with - =A6 * B1, Multiply two values with * =C3 / B4, Divide two values with / =B1 ^ C1, Raise a value to power with ^
<b>Numeric Comparisons</b>	<b>Test for equality with =</b> =A1 = B1 Returns TRUE, if A1 is equal to B1, FALSE, if A1 is not equal to B1.  <b>Test greater than with &gt;</b> =A1 > B1 Returns TRUE, if A1 is greater than B1. Returns FALSE, if A1 is not greater than B1.  <b>Test greater than or equal to with &gt;=</b> =A1 >= B1 Returns TRUE, if A1 is greater than or equal to B1. Returns FALSE, if A1 is not greater than or equal to B1.  <b>Test less than with &lt;</b>

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	<p>=A1 &lt; B1 Returns TRUE, if A1 is less than B1. Returns FALSE, if A1 is not less than B1.</p> <p><b>Test less than or equal to with &lt;=</b> =A1 &lt;= B1 Returns TRUE, if A1 is less than or equal to B1. Returns FALSE, if A1 is not less than or equal to B1.</p>
<b>Math functions</b>	<p>=MAX(A1:A6, C1:C3), Returns the largest value in specified cells</p> <p>=MIN(A1:A6, C1:C3), Returns the smallest value in specified cells</p> <p>=SUM(A1:A6, C1:C3), Returns the sum of the specified cells</p> <p>=AVERAGE(A1:A6, C1:C3), Returns the mean of the specified cells</p> <p>=MEDIAN(A1:A6, C1:C3), Returns the median of the specified cells</p> <p>=PERCENTILE.INC(C1:C6, 0.25), Returns the 25th percentile of the cell ranges</p>
<b>Type a complicated formula</b>	<p>On the worksheet, click the cell in which you want to enter the formula.</p> <p>Type the “=” (equal sign) followed by the constants and operators that you want to use in the calculation.</p> <p>Press Enter (Windows) or Return (Mac).</p>
<b>Enter the array formula</b>	<p>On the worksheet, click the cell in which you want to enter the formula.</p> <p>Type the “=” (equal sign).</p> <p>Select the range of the first array.</p> <p>Add the operator.</p> <p>Select the range of the second array.</p> <p>Press <b>Enter</b> (Windows) or <b>Return</b> (Mac).</p>
<b>Logical conditions</b>	<p>Use a logical condition to determine the return value with IF()</p> <p><b>=IF(cond, return if true, return if false)</b></p> <p>=IF(ISBLANK(A5), "A5 is blank", "A5 is not blank") Returns "A5 is blank" if A5 is blank, otherwise returns "A5 is not blank"</p>
<b>Conditional formatting</b>	<p>Select the range of cells that you want to apply conditional formatting to.</p> <p>On the Home tab, click Conditional Formatting. (In Sheets go to Format tab)</p> <p>In the Color Scales, choose the 2-color rule.</p>