

# Excel Formulas and Functions

Examples of these can be found at:

[www.cpsb.org/presentations/excel/formulas.xls](http://www.cpsb.org/presentations/excel/formulas.xls)

Grade Book Template can be found at:

[www.cpsb.org/presentations/excel/gradebook.xls](http://www.cpsb.org/presentations/excel/gradebook.xls)

## Mathematical Formulas

Add	=A1+B1
Subtract	=A1-B1
Multiply	=A1*B1
Divide	=A1/B1

## Logical Functions

If	=if(logical test, value if true, value if false) =if(A1>B1, A1, B1)
	If cell A1 is greater than cell B1, return the value in A1 otherwise return the value of B1.
Nested IF	=IF(V5>='Grade Scale'!B\$1,"A",IF(AND(V5>='Grade Scale'!B\$2, V5<'Grade Scale'!B\$1),"B",IF(AND(V5>='Grade Scale'!B\$3, V5<'Grade Scale'!B\$2),"C",IF(AND(V5>='Grade Scale'!B\$4, V5<'Grade Scale'!B\$3),"D",IF(V5<'Grade Scale'!B\$4,"U")))))
	IF cell V5 is greater than or equal to 90 then return the letter A otherwise if it is greater than or equal to 80 AND less than 90 then return the letter B otherwise if it is greater than or equal to 70 AND less than 80 then return the letter C otherwise if it is greater than or equal to 60 AND less than 70 then return the letter D otherwise if it is less than 60 then return the letter U. You can nest up to seven "IF" statements in one formula. (See column W on the "Grades" sheet.)

## Statistical Functions

Average	=average(A1:G1)
	Gives you the average of cells A1 through G1. (See column V on the "Grades" sheet.)
Count If	=countif(A1:G1,">50")
	Counts the number of cells that are greater than 50. (See cell J5 on the "Field Trip" sheet.)
Max	=max(C3:C12)
	Returns the largest number in cells C3 through C13. (See cell C15 on the "Fundraiser" sheet.)

Questions, email [lisa.mullett@cpsb.org](mailto:lisa.mullett@cpsb.org)

All resources can be found at: [www.cpsb.org/presentations/excel](http://www.cpsb.org/presentations/excel)

## Text Functions

Concatenate	=A1 & “, “ & B1
	Combines cell values. For example if cell A1 held the last names and cell B1 held the first names, this formula would return Last Name, First Name into one cell. (See column A on the “Grades” sheet.)
Left	=Left(A1, 1)
	Use this formula to get parts of a cell. For example, if cell A1 held the last names, this formula would return the first initial of their last names. (See column F on the “Roster” sheet.)

## Other Stuff

Conditional Formatting	Format/Conditional Formatting
	Change the formatting on cells based on up to three conditions you specify. (See the grade columns on the “Grades” sheet.) On Home Tab, see Highlight Rules, etc.
Paste Special	Paste Special/Values Only
	Use this to paste values created from a formula to use in other places or to remove the formulas.
Cell References	Absolute vs. Relative
	Use a \$ before the column letter to make the column reference absolute. \$A1 - When copying the formula, it will remain A and only the row number will change.  Use a \$ before the row number to make the row reference absolute. A\$1 - When copying the formula, it will remain 2 and only the column letter will change.  Use a \$ before both column letter and row number to make both references absolute. \$A\$1 – When copying the formula, it will remain \$A\$1.
Text to Columns	Data/Text to Columns...
	Use this when you need to separate information from one cell into multiple cells. For example, if you have a column with students’ first and last names, you can use this feature to split the text into two columns...one containing first names and another containing last names.

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