Advanced Excel for Productivity

Functions Reference

Logic Functions

IF	Return different values based on TRUE or FALSE
AND	Multiple conditions have to be TRUE
OR	Any condition has to be TRUE
NOT	Converts TRUE to FALSE and FALSE to TRUE
IFERROR	Control what is output if input is an error
ISERROR	Test if input is an error, return TRUE or FALSE
ISNA	Test if input is #N/A, return TRUE or FALSE
ISBLANK	Test if input is blank, return TRUE or FALSE

Text Functions

TRIM	Removes excess spaces from text
CLEAN	Removes unprintable characters
UPPER	Convert to all UPPER CASE
LOWER	Convert to all lower case
PROPER	Convert to all Proper Case
FIND	Find position of text within text (CS)*
SEARCH	Find position of text within text (NCS)**
LEFT	Left-most X characters from text
RIGHT	Right-most X characters from text
MID	X characters starting with Y-th character
LEN	Length of text
REPLACE	Remove X characters; replace with new text
SUBSTITUTE	Remove old text; replace with new text
CONCATENATE	Paste together strings
VALUE	Convert text to numeric value
TEXT	Convert numeric value to formatted text

Aggregate and Data Functions

SUM	Sum of values
SUMIF	Sum of values that meet a condition
SUMIFS	Sum of values that meet multiple conditions
SUMPRODUCT	Multiply values in 2 ranges then add the results
COUNT	Count cells in range that contains numbers
COUNTIF	Count cells in range that meet a condition
COUNTIFS	Count cells that meet multiple conditions
COUNTA	Count cells in range that are not blank
COUNTBLANK	Count cells in range that are blank
AVERAGE	Average of values
AVERAGEIF	Average of values that meet a condition
MAX	Maximum of values
MIN	Minimum of values
MEDIAN	Median (middle value) of values
PERCENTILE	Nth percentie within values
MODE	Mode (most frequent value) among values
STDEV / STDEVP	Standard deviation of values
VAR / VARP	Variance of values
CORREL	Correlation between two sets of values
COVAR	Coveriance between two sets of values
RANK	Where a value ranks in a range of values
LARGE	Returns Nth largest value in a range
SMALL	Returns Nth smallest value in a range

Math Functions

ROUND	Round to the nearest X digits
ROUNDUP	Round up to the nearest X digits
ROUNDDOWN	Round down to the nearest X digits
ABS	Absolute value
TRUNC	Truncate by removing decimals
SQRT	Square root
EXP	Exponential (e^X)
LN	Natural log
LOG	Log base X
RAND	Random number between 0 and 1
RANDBETWEEN	Random number between X and Y

Lookup and Offset Functions

VLOOKUP	Look for a value vertically in a table
HLOOKUP	Look for a value horizontally in a table
INDEX	Return the Nth value in a row or column
MATCH	Find a value within a row or column
OFFSET	Move or resize a cell reference
ADDRESS	Convert Row# and Col# into cell reference
ROW	Row number of cell reference
COLUMN	Column number of cell reference

Financial Functions

XIRR	Annual IRR from dates and cash flows
XNPV	NPV from dates and cash flows
PMT	Investment's periodic Payment
RATE	Investment's periodic Interest Rate
NPER	Investment's Number of Periods
PV	Investment's Present Value (not NPV!)
FV	Investment's Future Value

Date Functions

TODAY	Today's date (always updates)
NOW	Current date and time (always updates)
DATE	Convert Month/Day/Year values to date
YEAR	Return year component of a date
MONTH	Return month component of a date
DAY	Return day component of a date
EDATE	Move a date forward/backward X months
EOMONTH	Last day of the month of a date
NETWORKDAYS	Number of workdays between dates

Function Tips and Shortcuts

#REF! errors should always be corrected, ASAP

#N/A error can be meaningful, best handled with IFERROR

Named References make formulas easier to understand

F2 and ESC: look inside cells to see their formulas

F4: anchor cells within formulas

F9: evaluate the selected part of a formula

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* Case-sensitive
** Not case-sensitive