Stat 328

Part-1

Statistical Analysis using Excel

There are many statistical analysis methods can be achieved using Excel

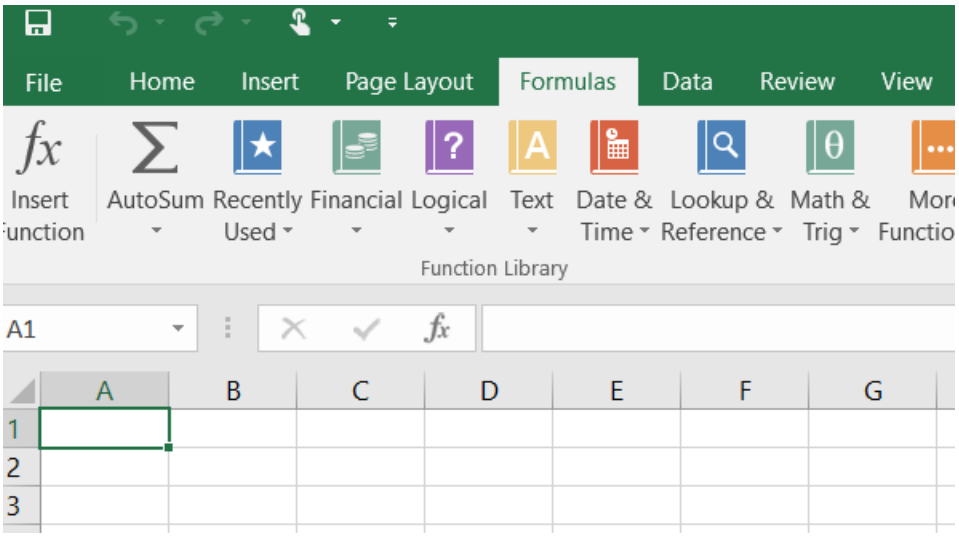
1-1 Functions

Three different type of function can be used in statistics; they are:

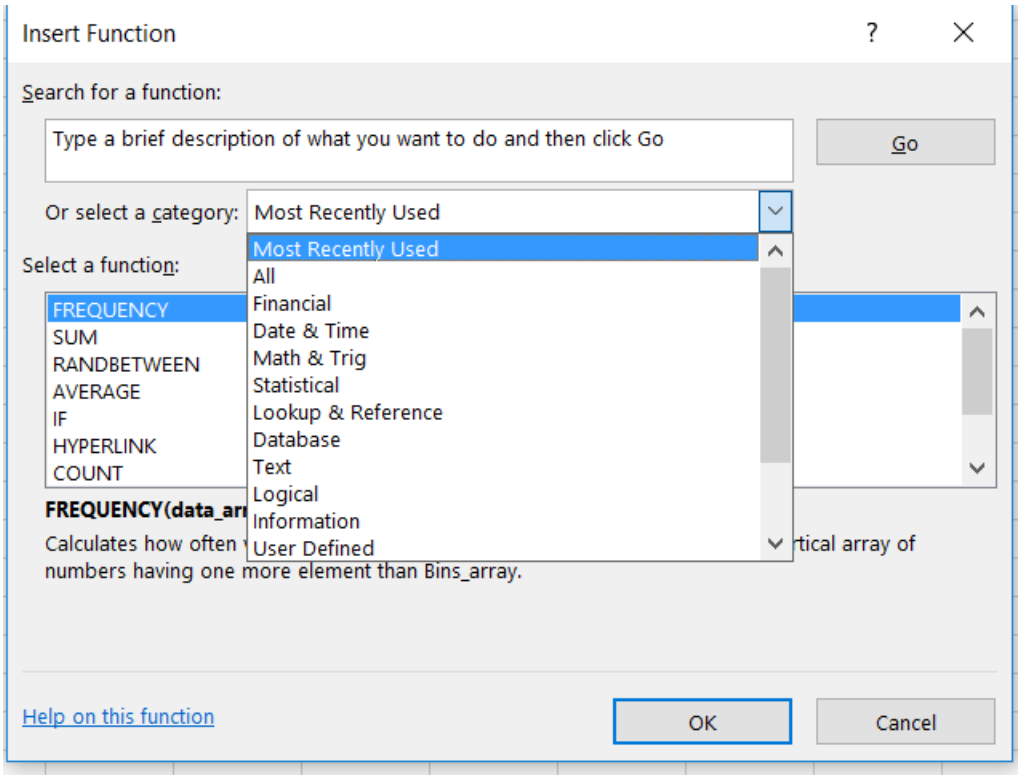
(a) Statistical Functions
(b) Mathematical Functions
(c) Logical Functions

These function can be obtained from excel as:

Click the **Formulas** tab, then select the **Insert Function** command


File
Home
Insert
Page Layout
Formulas
Data
Review
View
Insert Function
AutoSum
Recently Used
Financial
Logical
Text
Date & Time
Lookup & Reference
Math & Trig
Function Library
A1
A
B
C
D
E
F
G
1
2
3

Then, we get


Insert Function
Search for a function:
Type a brief description of what you want to do and then click Go
Go
Or select a category:
Most Recently Used
Select a function:
FREQUENCY
SUM
RANDBETWEEN
AVERAGE
IF
HYPERLINK
COUNT
Most Recently Used
All
Financial
Date & Time
Math & Trig
Statistical
Lookup & Reference
Database
Text
Logical
Information
User Defined
numbers having one more element than Bins_array.
Help on this function
OK
Cancel

So, if we select the statistical to get a list of possible statistical functions as follows:

Count & Frequency	
COUNT	Returns the number of numerical values in a supplied set of cells or values
COUNTA	Returns the number of non-blanks in a supplied set of cells or values
COUNTBLANK	Returns the number of blank cells in a supplied range
COUNTIF	Returns the number of cells (of a supplied range), that satisfy a given criteria
COUNTIFS	Returns the number of cells (of a supplied range), that satisfy a set of given criteria *(New in Excel 2007)*
FREQUENCY	Returns an array showing the number of values from a supplied array, which fall into specified ranges

Finding the Largest & Smallest Values	
MAX	Returns the largest value from a list of supplied numbers
MAXA	Returns the largest value from a list of supplied values, counting text and the logical value FALSE as the value 0 and counting the logical value TRUE as the value 1
MAXIFS	Returns the largest value from a subset of values in a list that are specified according to one or more criteria. *(New in Excel 2016)*
MIN	Returns the smallest value from a list of supplied numbers
MINA	Returns the smallest value from a list of supplied values, counting text and the logical value FALSE as the value 0 and counting the logical value TRUE as the value 1
MINIFS	Returns the smallest value from a subset of values in a list that are specified according to one or more criteria. *(New in Excel 2016)*
LARGE	Returns the Kth LARGEST value from a list of supplied numbers, for a given value K
SMALL	Returns the Kth SMALLEST value from a list of supplied numbers, for a given value K

Percentiles, Quartiles & Rank

PERCENTILE	Returns the K'th percentile of values in a supplied range, where K is in the range 0 - 1 (inclusive) *(Replaced by Percentile.Inc function in Excel 2010)*
PERCENTILE.INC	Returns the K'th percentile of values in a supplied range, where K is in the range 0 - 1 (inclusive) *(New in Excel 2010 - replaces the Percentile function)*
PERCENTILE.EXC	Returns the K'th percentile of values in a supplied range, where K is in the range 0 - 1 (exclusive) *(New in Excel 2010)*
QUARTILE	Returns the specified quartile of a set of supplied numbers, based on percentile value 0 - 1 (inclusive) *(Replaced by Quartile.Inc function in Excel 2010)*
QUARTILE.INC	Returns the specified quartile of a set of supplied numbers, based on percentile value 0 - 1 (inclusive) *(New in Excel 2010 - replaces the Quartile function)*
QUARTILE.EXC	Returns the specified quartile of a set of supplied numbers, based on percentile value 0 - 1 (exclusive) *(New in Excel 2010)*
RANK	Returns the statistical rank of a given value, within a supplied array of values *(Replaced by Rank.Eq function in Excel 2010)*
RANK.EQ	Returns the Mode (the most frequently occurring value) of a list of supplied numbers (if more than one value has same rank, the top rank of that set is returned) *(New in Excel 2010 - replaces the Rank function)*
RANK.AVG	Returns the statistical rank of a given value, within a supplied array of values (if more than one value has same rank, the average rank is returned) *(New in Excel 2010)*
PERCENTRANK	Returns the rank of a value in a data set, as a percentage (0 - 1 inclusive) *(Replaced by Percentrank.Inc function in Excel 2010)*
PERCENTRANK.INC	Returns the rank of a value in a data set, as a percentage (0 - 1 inclusive) *(New in Excel 2010 - replaces the Percentrank function)*
PERCENTRANK.EXC	Returns the rank of a value in a data set, as a percentage (0 - 1 exclusive) *(New in Excel 2010)*

Averages

AVERAGE	Returns the Average of a list of supplied numbers
AVERAGEA	Returns the Average of a list of supplied numbers, counting text and the logical value FALSE as the value 0 and counting the logical value TRUE as the value 1
AVERAGEIF	Calculates the Average of the cells in a supplied range, that satisfy a given criteria *(New in Excel 2007)*
AVERAGEIFS	Calculates the Average of the cells in a supplied range, that satisfy multiple criteria *(New in Excel 2007)*

MEDIAN	Returns the Median (the middle value) of a list of supplied numbers
MODE	Returns the Mode (the most frequently occurring value) of a list of supplied numbers *(Replaced by Mode.Sngl function in Excel 2010)*
MODE.SNGL	Returns the Mode (the most frequently occurring value) of a list of supplied numbers *(New in Excel 2010 - replaces the Mode function)*
MODE.MULT	Returns a vertical array of the most frequently occurring values in an array or range of data *(New in Excel 2010)*
GEOMEAN	Returns the geometric mean of a set of supplied numbers
HARMEAN	Returns the harmonic mean of a set of supplied numbers
TRIMMEAN	Returns the mean of the interior of a supplied set of values

Deviation & Variance

AVEDEV	Returns the average of the absolute deviations of data points from their mean
DEVSQ	Returns the sum of the squares of the deviations of a set of data points from their sample mean
STDEV	Returns the standard deviation of a supplied set of values (which represent a sample of a population) *(Replaced by Stdev.S function in Excel 2010)*
STDEV.S	Returns the standard deviation of a supplied set of values (which represent a sample of a population) *(New in Excel 2010 - replaces the Stdev function)*
STDEVA	Returns the standard deviation of a supplied set of values (which represent a sample of a population), counting text and the logical value FALSE as the value 0 and counting the logical value TRUE as the value 1
STDEVP	Returns the standard deviation of a supplied set of values (which represent an entire population) *(Replaced by Stdev.P function in Excel 2010)*
STDEV.P	Returns the standard deviation of a supplied set of values (which represent an entire population) *(New in Excel 2010 - replaces the Stdevp function)*
STDEVPA	Returns the standard deviation of a supplied set of values (which represent an entire population), counting text and the logical value FALSE as the value 0 and counting the logical value TRUE as the value 1
VAR	Returns the variance of a supplied set of values (which represent a sample of a population) *(Replaced by Var.S function in Excel 2010)*

VAR.S	Returns the variance of a supplied set of values (which represent a sample of a population) *(New in Excel 2010 - replaces the Var function)*
VARA	Returns the variance of a supplied set of values (which represent a sample of a population), counting text and the logical value FALSE as the value 0 and counting the logical value TRUE as the value 1
VARP	Returns the variance of a supplied set of values (which represent an entire population) *(Replaced by Var.P function in Excel 2010)*
VAR.P	Returns the variance of a supplied set of values (which represent an entire population) *(New in Excel 2010 - replaces the Varp function)*
VARPA	Returns the variance of a supplied set of values (which represent an entire population), counting text and the logical value FALSE as the value 0 and counting the logical value TRUE as the value 1
COVAR	Returns population covariance (i.e. the average of the products of deviations for each pair within two supplied data sets) *(Replaced by Covariance.P function in Excel 2010)*
COVARIANCE.P	Returns population covariance (i.e. the average of the products of deviations for each pair within two supplied data sets) *(New in Excel 2010 - replaces the Covar function)*
COVARIANCE.S	Returns sample covariance (i.e. the average of the products of deviations for each pair within two supplied data sets) *(New in Excel 2010)*

Confidence Intervals	
CONFIDENCE	Returns the confidence interval for a population mean, using a normal distribution *(Replaced by Confidence.Norm function in Excel 2010)*
CONFIDENCE.NORM	Returns the confidence interval for a population mean, using a normal distribution *(New in Excel 2010 - replaces the Confidence function)*
CONFIDENCE.T	Returns the confidence interval for a population mean, using a Student's t distribution *(New in Excel 2010)*

Trend Line Functions	
FORECAST	Predicts a future point on a linear trend line fitted to a supplied set of x- and y- values
INTERCEPT	Calculates the best fit regression line, through a supplied series of x- and y-values and returns the value at which this line intercepts the y-axis
LINEST	Returns statistical information describing the trend of the line of best fit, through a supplied series of x- and y- values

SLOPE	Returns the slope of the linear regression line through a supplied series of x- and y- values
TREND	Calculates the trend line through a given set of y-values and returns additional y-values for a supplied set of new x-values
GROWTH	Returns numbers in a exponential growth trend, based on a set of supplied x- and y- values
LOGEST	Returns the parameters of an exponential trend for a supplied set of x- and y- values
STEYX	Returns the standard error of the predicted y-value for each x in the regression line for a set of supplied x- and y- values

PERMUT	Returns the number of permutations for a given number of objects
PERMUTATIONA	Returns the number of permutations for a given number of objects (with repetitions) that can be selected from the total objects *(New in Excel 2013)*

Distribution & Tests of Probability

BETADIST	Returns the cumulative beta probability density function *(Replaced by Beta.Dist function in Excel 2010)*
BETA.DIST	Returns the cumulative beta distribution function or the beta probability density function *(New in Excel 2010 - replaces the Betadist function)*
BETAINV	Returns the inverse of the cumulative beta probability density function *(Replaced by Beta.Inv function in Excel 2010)*
BETA.INV	Returns the inverse of the cumulative beta probability density function *(New in Excel 2010 - replaces the Betainv function)*
BINOMDIST	Returns the individual term binomial distribution probability *(Replaced by Binom.Dist function in Excel 2010)*
BINOM.DIST	Returns the individual term binomial distribution probability *(New in Excel 2010 - replaces the Binomdist function)*

BINOM.DIST.RANGE	Returns the probability of a trial result using a binomial distribution *(New in Excel 2013)*
NEGBINOMDIST	Returns the negative binomial distribution *(Replaced by Negbinom.Dist function in Excel 2010)*
NEGBINOM.DIST	Returns the negative binomial distribution *(New in Excel 2010 - replaces the Negbinomdist function)*
CRITBINOM	Returns the smallest value for which the cumulative binomial distribution is greater than or equal to a criterion value *(Replaced by Binom.Inv function in Excel 2010)*
BINOM.INV	Returns the smallest value for which the cumulative binomial distribution is greater than or equal to a criterion value *(New in Excel 2010 - replaces the Critbinom function)*
CHIDIST	Returns the right-tailed probability of the chi-squared distribution *(Replaced by Chisq.Dist.Rt function in Excel 2010)*
CHISQ.DIST.RT	Returns the right-tailed probability of the chi-squared distribution *(New in Excel 2010 - replaces the Chidist function)*
CHISQ.DIST	Returns the chi-squared distribution (probability density or cumulative distribution function) *(New in Excel 2010)*
CHIINV	Returns the inverse of the right-tailed probability of the chi-squared distribution *(Replaced by Chisq.Inv.Rt function in Excel 2010)*
CHISQ.INV.RT	Returns the inverse of the right-tailed probability of the chi-squared distribution *(New in Excel 2010 - replaces the Chiinv function)*
CHISQ.INV	Returns the inverse of the left-tailed probability of the chi-squared distribution *(New in Excel 2010)*
CHITEST	Returns the chi-squared statistical test for independence *(Replaced by Chisq.Test function in Excel 2010)*
CHISQ.TEST	Returns the chi-squared statistical test for independence *(New in Excel 2010 - replaces the Chitest function)*
CORREL	Returns the correlation coefficient between two sets of values
EXPONDIST	Returns the exponential distribution *(Replaced by Expon.Dist function in Excel 2010)*
EXPON.DIST	Returns the exponential distribution *(New in Excel 2010 - replaces the Expondist function)*
FDIST	Returns the right-tailed F probability distribution for two data sets *(Replaced by F.Dist.Rt function in Excel 2010)*

F.DIST.RT	Returns the right-tailed F probability distribution for two data sets *(New in Excel 2010 - replaces the Fdist function)*
F.DIST	Returns the F probability distribution (probability density or cumulative distribution function) *(New in Excel 2010)*
FINV	Returns the inverse of the right-tailed F probability distribution for two data sets *(Replaced by F.Inv.Rt function in Excel 2010)*
F.INV.RT	Returns the inverse of the right-tailed F probability distribution for two data sets *(New in Excel 2010 - replaces the Finv function)*
F.INV	Returns the inverse of the Cumulative F distribution *(New in Excel 2010)*
FISHER	Returns the Fisher transformation
FISHERINV	Returns the inverse of the Fisher transformation
FTEST	Returns the result of an F-Test for 2 supplied data sets *(Replaced by F.Test function in Excel 2010)*
F.TEST	Returns the result of an F-Test for 2 supplied data sets *(New in Excel 2010 - replaces the Ftest function)*
GAMMADIST	Returns the gamma distribution *(Replaced by Gamma.Dist function in Excel 2010)*
GAMMA.DIST	Returns the gamma distribution *(New in Excel 2010 - replaces the Gammadist function)*
GAMMAINV	Returns the inverse gamma cumulative distribution *(Replaced by Gamma.Inv function in Excel 2010)*
GAMMA.INV	Returns the inverse gamma cumulative distribution *(New in Excel 2010 - replaces the Gammainv function)*
GAMMA	Return the gamma function value for a supplied number *(New in Excel 2013)*
GAMMALN	Calculates the natural logarithm of the gamma function for a supplied value
GAMMALN.PRECISE	Returns the natural logarithm of the gamma function for a supplied value *(New in Excel 2010)*
GAUSS	Calculates the probability that a member of a standard normal population will fall between the mean and z standard deviations from the mean *(New in Excel 2013)*
HYPGEOMDIST	Returns the hypergeometric distribution *(Replaced by Hypgeom.Dist function in Excel 2010)*
HYPGEOM.DIST	Returns the hypergeometric distribution *(New in Excel 2010 - replaces the Hypgeomdist function)*

KURT	Returns the kurtosis of a data set
LOGNORMDIST	Returns the cumulative log-normal distribution *(Replaced by Lognorm.Dist function in Excel 2010)*
LOGNORM.DIST	Returns the log-normal probability density function or the cumulative log- normal distribution *(New in Excel 2010 - replaces the Lognormdist function)*
LOGINV	Returns the inverse of the lognormal distribution *(Replaced by Lognorm.Inv function in Excel 2010)*
LOGNORM.INV	Returns the inverse of the lognormal distribution *(New in Excel 2010 - replaces the Loginv function)*
NORMDIST	Returns the normal cumulative distribution *(Replaced by Norm.Dist function in Excel 2010)*
NORM.DIST	Returns the normal cumulative distribution *(New in Excel 2010 - replaces the Normdist function)*
NORMINV	Returns the inverse of the normal cumulative distribution *(Replaced by Norm.Inv function in Excel 2010)*
NORM.INV	Returns the inverse of the normal cumulative distribution *(New in Excel 2010 - replaces the Norminv function)*
NORMSDIST	Returns the standard normal cumulative distribution *(Replaced by Norm.S.Dist function in Excel 2010)*
NORM.S.DIST	Returns the standard normal cumulative distribution *(New in Excel 2010 - replaces the Normsdist function)*
NORMSINV	Returns the inverse of the standard normal cumulative distribution *(Replaced by Norm.S.Inv function in Excel 2010)*
NORM.S.INV	Returns the inverse of the standard normal cumulative distribution *(New in Excel 2010 - replaces the Normsinv function)*
PEARSON	Returns the Pearson product moment correlation coefficient
RSQ	Returns the square of the Pearson product moment correlation coefficient
PHI	Returns the value of the density function for a standard normal distribution, for a supplied number *(New in Excel 2013)*
POISSON	Returns the Poisson distribution *(Replaced by Poisson.Dist function in Excel 2010)*
POISSON.DIST	Returns the Poisson distribution *(New in Excel 2010 - replaces the Poisson function)*
PROB	Returns the probablity that values in a supplied range are within given limits

SKEW	Returns the skewness of a distribution
SKEW.P	Returns the skewness of a distribution based on a population *(New in Excel 2013)*
STANDARDIZE	Returns a normalized value
TDIST	Returns the Student's T-distribution *(Replaced by T.Dist.2t & T.Dist.Rt functions in Excel 2010)*
T.DIST.2T	Returns the two-tailed Student's T-distribution *(New in Excel 2010 - replaces the Tdist function)*
T.DIST.RT	Returns the right-tailed Student's T-distribution *(New in Excel 2010 - replaces the Tdist function)*
T.DIST	Returns the Student's T-distribution (probability density or cumulative distribution function) *(New in Excel 2010)*
TINV	Returns the two-tailed inverse of the Student's T-distribution *(Replaced by T.Inv.2t function in Excel 2010)*
T.INV.2T	Returns the two-tailed inverse of the Student's T-distribution *(New in Excel 2010 - replaces the Tinv function)*
T.INV	Returns the left-tailed inverse of the Student's T-distribution *(New in Excel 2010)*
TTEST	Returns the probability associated with a Student's T-Test *(Replaced by T.Test function in Excel 2010)*
T.TEST	Returns the probability associated with a Student's T-Test *(New in Excel 2010 - replaces the Ttest function)*
WEIBULL	Returns the Weibull distribution *(Replaced by Weibull.Dist function in Excel 2010)*
WEIBULL.DIST	Returns the Weibull distribution *(New in Excel 2010 - replaces the Weibull function)*
ZTEST	Returns the one-tailed probability value of a z-test *(Replaced by Z.Test function in Excel 2010)*
Z.TEST	Returns the one-tailed probability value of a z-test *(New in Excel 2010 - replaces the Ztest function)*

Similarly, if we select the Math& Trig We get a list of possible Mathematical functions as follows:

Basic Numeric Information	
ABS	Returns the absolute value (i.e. the modulus) of a supplied number
SIGN	Returns the sign (+1, -1 or 0) of a supplied number
GCD	Returns the Greatest Common Divisor of two or more supplied numbers
LCM	Returns the Least Common Multiple of two or more supplied numbers

Basic Mathematical Operations	
SUM	Returns the sum of a supplied list of numbers
PRODUCT	Returns the product of a supplied list of numbers
POWER	Returns the result of a given number raised to a supplied power
SQRT	Returns the positive square root of a given number
QUOTIENT	Returns the integer portion of a division between two supplied numbers
MOD	Returns the remainder from a division between two supplied numbers
AGGREGATE	Performs a specified calculation (e.g. the sum, product, average, etc.) for a list or database, with the option to ignore hidden rows and error values *(New in Excel 2010)*
SUBTOTAL	Performs a specified calculation (e.g. the sum, product, average, etc.) for a supplied set of values

Rounding Functions	
CEILING	Rounds a number away from zero (i.e. rounds a positive number up and a negative number down), to a multiple of significance
CEILING.PRECISE	Rounds a number up, regardless of the sign of the number, to a multiple of significance *(New in Excel 2010)*

ISO.CEILING	Rounds a number up, regardless of the sign of the number, to a multiple of significance. *(New in Excel 2010)*
CEILING.MATH	Rounds a number up to the nearest integer or to the nearest multiple of significance *(New in Excel 2013)*
EVEN	Rounds a number away from zero (i.e. rounds a positive number up and a negative number down), to the next even number
FLOOR	Rounds a number towards zero, (i.e. rounds a positive number down and a negative number up), to a multiple of significance
FLOOR.PRECISE	Rounds a number down, regardless of the sign of the number, to a multiple of significance *(New in Excel 2010)*
FLOOR.MATH	Rounds a number down, to the nearest integer or to the nearest multiple of significance *(New in Excel 2013)*
INT	Rounds a number down to the next integer
MROUND	Rounds a number up or down, to the nearest multiple of significance
ODD	Rounds a number away from zero (i.e. rounds a positive number up and a negative number down), to the next odd number
ROUND	Rounds a number up or down, to a given number of digits
ROUNDDOWN	Rounds a number towards zero, (i.e. rounds a positive number down and a negative number up), to a given number of digits
ROUNDUP	Rounds a number away from zero (i.e. rounds a positive number up and a negative number down), to a given number of digits
TRUNC	Truncates a number towards zero (i.e. rounds a positive number down and a negative number up), to the next integer.

Matrix Functions	
MDETERM	Returns the matrix determinant of a supplied array
MINVERSE	Returns the matrix inverse of a supplied array
MMULT	Returns the matrix product of two supplied arrays
MUNIT	Returns the unit matrix for a specified dimension *(New in Excel 2013)*

Random Numbers	
RAND	Returns a random number between 0 and 1

RANDBETWEEN	Returns a random number between two given integers

Conditional Sums	
SUMIF	Adds the cells in a supplied range, that satisfy a given criteria
SUMIFS	Adds the cells in a supplied range, that satisfy multiple criteria *(New in Excel 2007)*

Advanced Mathematical Operations	
SUMPRODUCT	Returns the sum of the products of corresponding values in two or more supplied arrays
SUMSQ	Returns the sum of the squares of a supplied list of numbers
SUMX2MY2	Returns the sum of the difference of squares of corresponding values in two supplied arrays
SUMX2PY2	Returns the sum of the sum of squares of corresponding values in two supplied arrays
SUMXMY2	Returns the sum of squares of differences of corresponding values in two supplied arrays
SERIESSUM	Returns the sum of a power series

Trigonometry Functions	
PI	Returns the constant value of pi
SQRTPI	Returns the square root of a supplied number multiplied by pi
DEGREES	Converts Radians to Degrees
RADIANS	Converts Degrees to Radians
COS	Returns the Cosine of a given angle
ACOS	Returns the Arccosine of a number
COSH	Returns the hyperbolic cosine of a number
ACOSH	Returns the inverse hyperbolic cosine of a number
SEC	Returns the secant of an angle *(New in Excel 2013)*
SECH	Returns the hyperbolic secant of an angle *(New in Excel 2013)*
SIN	Returns the Sine of a given angle
ASIN	Returns the Arcsine of a number

SINH	Returns the Hyperbolic Sine of a number
ASINH	Returns the Inverse Hyperbolic Sine of a number
CSC	Returns the cosecant of an angle *(New in Excel 2013)*
CSCH	Returns the hyperbolic cosecant of an angle *(New in Excel 2013)*
TAN	Returns the Tangent of a given angle
ATAN	Returns the Arctangent of a given number
ATAN2	Returns the Arctangent of a given pair of x and y coordinates
TANH	Returns the Hyperbolic Tangent of a given number
ATANH	Returns the Inverse Hyperbolic Tangent of a given number
COT	Returns the cotangent of an angle *(New in Excel 2013)*
COTH	Returns the hyperbolic cotangent of an angle *(New in Excel 2013)*
ACOT	Returns the arccotangent of a number *(New in Excel 2013)*
ACOTH	Returns the hyperbolic arccotangent of a number *(New in Excel 2013)*

Exponents & Logarithms

EXP	Returns *e* raised to a given power
LN	Returns the natural logarithm of a given number
LOG	Returns the logarithm of a given number, to a specified base
LOG10	Returns the base 10 logarithm of a given number

Factorials

FACT	Returns the Factorial of a given number
FACTDOUBLE	Returns the Double Factorial of a given number
MULTINOMIAL	Returns the Multinomial of a given set of numbers

Miscellaneous

BASE	Converts a number into a text representation, with the supplied base *(New in Excel 2013)*
DECIMAL	Converts a text representation of a number in a specified base into a decimal number *(New in Excel 2013)*
COMBIN	Returns the number of combinations (without repititions) for a given number of objects
COMBINA	Returns the number of combinations (with repetitions) for a given number of items *(New in Excel 2013)*
ARABIC	Converts a Roman numeral to an Arabic numeral *(New in Excel 2013)*

ROMAN	Returns a text string depicting the roman numeral for a given number

Also, if we select the Logical, we get a list of possible logical functions as follows:

Function	Description
AND function	Returns TRUE if all of its arguments are TRUE
FALSE function	Returns the logical value FALSE
IF function	Specifies a logical test to perform
IFERROR function	Returns a value you specify if a formula evaluates to an error; otherwise, returns the result of the formula
IFNA function	Returns the value you specify if the expression resolves to #N/A, otherwise returns the result of the expression
IFS function	Checks whether one or more conditions are met and returns a value that corresponds to the first TRUE condition.
NOT function	Reverses the logic of its argument
OR function	Returns TRUE if any argument is TRUE
SWITCH function	Evaluates an expression against a list of values and returns the result corresponding to the first matching value. If there is no match, an optional default value may be returned.
TRUE function	Returns the logical value TRUE
XOR function	Returns a logical exclusive OR of all arguments

Examples

1- Math & Tri functions

No	Function	syntax	Description	Examples
1	ABS	ABS(number)	Valuate the absolute value of a number	Abs(6) = 6 Abs(-5) = 5
2	Combin	Combin(n;x)	Calculate the binomial coefficients $\binom{n}{x}$	Combin(5;3)=10
3				
4				
5				
6				

2-Statistical functions

No	Function	syntax	Description	Examples
1	Average	average(a1; a2; … an)	Calculate the mean of a1, a2, ….an	AVERAGE(1,8,9,2)=5
2	normdist	Normdist(x; mean; standard deviation; cumulative)	Calculate the cumulative probability function on normal distribution with given mean and standard derivation)	Normdist(1.96; 0; 1; True) = 0.9750
3	Norminv			

3-Logical statements

No	Function	syntax	Description	Examples
1	If	If(logical test; statment1 if true; statement 2 if false)	If statement; do statement 1 if true, do statement 2 if false	Let x be a column of values 1, 2, 3. write the following statement in the first cell of the column y if(x2<=1; 1; 2). The output of the column y will be 1,2,3.
2				