Common Statistical Functions

Columns

	C	D
4	1	2
5	2	4
6	5	6

Rows

Function	Example	Result	Definition	Calculation
AVERAGE	=AVERAGE(C4:D6)	3.33	Returns the arithmetic mean of selected values	=(sum of range C4:D6) / (# of values) = (1+2+2+4+5+6) / 6 = 20 / 6 = 3.3
MEDIAN	=MEDIAN(C4:D6)	3	Returns the median - or the value of the middle term (or arithmetic mean of the middle terms) of a sorted group	=sorted group: 1, 2, 2, 4, 5, 6 = middle terms are 2 and 4 = arithmetic mean = (2+4) / 2 = 3
MODE	=MODE(C4:D6)	2	Returns the value of the term that occurs the most often	Within the group 1, 2, 2, 4, 5, 6: the number that occurs twice is 2. All other numbers occur only once.
GEOMEAN	=GEOMEAN(C4:D6)	2.80	Returns the geometric mean of selected values, calculated as the nth root of the product of the values	=(1 x 2 x 2 x 4 x 5 x 6)^(1/6) = 480^(1/6) = 2.8
MIN	=MIN(C4:D6)	1	Returns the value of the lowest term	
MAX	=MAX(C4:D6)	6	Returns the value of the largest term	
CORREL	=CORREL(C4:C6,D4:D6)	0.96	Returns the correlation coefficient (r) between 2 data sets	
RSQ	=RSQ(C4:C6,D4:D6)	92%	Returns the square of the correlation coefficient, which measures how good of a predictor 1 variable is to another	
COUNT	=COUNT(C4:D6)	6	Counts how many numbers there are in a list. Text values are ignored	There are 6 terms in the selected range (1, 2, 2, 4, 5, 6)
COUNTA	=COUNTA(F4:F12)	9	Counts how many values there are in a list. Text values are included	In the selected range, there are 9 entries, beginning with AVERAGE and ending with COUNTA.

Common Statistical Functions

	Columns	
	C	D
4	1	2
5	2	4
6	5	6

(Rows)

Function	Example	Result	Definition	Explanation
STDEV	=STDEV(C4:D6)	1.97	Estimates the standard deviation based on a sample	
STDEVP	=STDEVP(C4:D6)	1.80	Estimates the standard deviation based on a population	
VAR	=VAR(C4:D6)	3.87	Estimates the variance based on a sample	
LARGE	=LARGE(C4:D6, 2)	5	Returns the xth largest value in a data set (e.g. 1st, 2nd, 3rd largest). The 1st argument is the data set, the 2nd is the rank.	In the data set example to the left, the 2nd largest value is 5.
SMALL	=SMALL(C4:D6, 2)	2	Returns the xth smallest value in a data set (e.g. 1st, 2nd, 3rd smallest). The 1st argument is the data set, the 2nd is the rank.	In the data set example to the left, the 2nd smallest value is 2.
RANK	=RANK(D6,C4:D6, 1)	1	Returns the rank in a given data set. The 1st argument is the value; the 2nd argument is the data set; and the 3rd is the type: 0 (ascending), 1 (descending).	The value of cell D5 (6) is ranked 1sr within the dataset, assuming an ascending-ranked order.
QUARTILE	=QUARTILE(C4:D6, 1)	2	Returns the quartile of a data set. The 1st argument is the data set. The 2nd is the type of quartile (0 = Min, 1 = 25%, 2 = 50% (Median), 3 = 75% and 4 = Max.)	The value 2 represents the 25th percentile (i.e. 1st quartile) within the data set
PERCENTILE	=PERCENTILE(C4:D6, 0.5)	3	Returns the x-percentile of data values in a data set. The 1st argument is the data set. The 2nd argument is the specified percentage (must be between 0 and 1).	The value 3 represents the 50th percentile (i.e. 0.5) value within the data set.
PERCENTRANK	=PERCENTRANK(C4:D6, D4)	20%	Returns the percentage rank (percentile) of the given value in a data set. The 1st argument is the data set, the 2nd is the given value.	The value of Cell D4 (2) is the 20th percentile of the given data set .