BASIC STATISTICS USING EXCEL(2016)

Description	Function	Example
Binomial Probability (**At least**-)	1 - (**BINOM.DIST** (number, trial, probability, **TRUE**))	1 - BINOM.DIST (2, 9, 0.44, **TRUE**) gives P(x ≥3) 3and more
Binomial Probability (**At most**)	**BINOM.DIST** (number, trial, probability, **TRUE**)	BINOM.DIST (3, 9, 0.44, **TRUE**) gives P(x ≤ 3) up to 3
Binomial Probability (**Exactly**)	**BINOM.DIST** (number, trial, probability, **FALSE**)	BINOM.DIST (3, 9, 0.44, **FALSE**)
Combination	**COMBIN** (total number available, number-chosen)-without repetition **COMBIN** (total number available, number-chosen)-with repetition	COMBIN (10,3) COMBINA (10,3)-with repetition
Find **Critical-t α/2** for a given confidence **c**	**T.INV** ((1-c)/2, degree of freedom)	T.INV ((1-0.98)/2, 5)
Find **Critical-z** with a given confidence **c** (**Left**)	**NORM.S.INV** (1-c)	NORM.S.INV ((1- 0.98))
Find **Critical-z** with a given confidence **c** (**Right**)	**ABS (NORM.S.INV** (1-c))	ABS (NORM.S.INV (1- 0.98))
Find **Critical-z** with a given confidence **c (Two Tail)**	**NORM.S.INV** ((1-c)/2)	NORM.S.INV((1-0.98)/2)
Find **Margin of Error** E (Normal Distribution)	**CONFIDENCE.NORM** (alpha, standard deviation, size)	CONFIDENCE.NORM (0.05,10.2,35)
Find **Margin of Error** E (T-Distribution)	**CONFIDENCE.T** (alpha, standard deviation, size)	CONFIDENCE.T(0.05,10.2,35)
Find **Probability** from a **given x-value** (Area to the left when **μ = 0, σ =1**)	**NORM.S.DIST** (x, **cumulative**)	NORM.S.DIST (2.35, **TRUE**)
Find **Probability** from a **given x-value** (Area to the left with a **given mean and standard deviation**)	**NORM.DIST** (x, mean, standard deviation, **cumulative**)	NORM.DIST (500,300, 35, **TRUE**)
Find **p-value** from a **t-statistic**	**T.DIST** (x, df,True) gives LEFT tail **T.DIST.RT** (x, df) gives RIGHT tail	T.DIST (2.35, 5,True) T.DIST.RT(2.35, 5)
Find **p-value** from a **z-statistic**(Area to the left when **μ = 0, σ =1**)	**NORM.S.DIST** (z-stat, **TRUE**)	NORM.S.DIST (-2.35, TRUE)
Find **t-value** from a given probability (Returns **left tail**)	**T.INV** (probability, degree of freedom)	T.INV (0.33, 5)
Find **t-value** from a given probability (Returns **Right tail**)	**ABS ((T.INV** (probability, degree of freedom))	ABS (T.INV (0.33,5))
Find **z-value** from a given probability	**NORM.INV** (area to the left, mean, standard deviation)	NORM.INV (0.79,21,4)
Finding **Correlation coefficient 'r'**	**CORREL** (Array of X-values, Array of Y-values) **PEARSON** (Array of X-values, Array of Y-values)	CORREL(A1:A10, B1:B10) PEARSON (A1: A10, B1:B10)
Finding **p-value** using **Chi Squared Distribution**	**CHISQ.TEST**(Array of Actual Frequency, Array of Expected Frequency)	CHISQ.TEST(A1:A10, C1:C10)
Median	**MEDIAN** (Address of First Data Cell : Address of Last Data Cell)	MEDIAN (A3:A10)

Description	Function	Example
Midrange	(**MAX** (Address of First Data Cell : Address of Last Data Cell) + **MIN** (Address of First Data Cell : Address of Last Data Cell)) / 2	(MAX(A3:A10) + MIN(A3:A10))/2
Mode	**MODE.SNGL** (Address of First Data Cell : Address of Last Data Cell)	MODE.SNGL(A3:A10)
Percentile	**PERCENTILE.EXC** (Data Array, kth percentile)	PERCENTILE.EXC (Data Array, 0.7) gives 70th percentile
Permutation (**without replacement**)	**PERMUT** (Total number, number chosen)	PERMUT (4,3)
Permutation (**with replacement**)	**PERMUTATIONA** (Total number, chosen)	PERMUTATIONA (4,3)
Population Mean (**μ**)	**AVERAGE** (Address of First Data Cell : Address of Last Data Cell)	Average (A3:A10)
Population Standard Deviation (**σ**)	**STDEV.P** (Address of First Data Cell : Address of Last Data Cell)	STDEV.P (A3:A10)
Population Variance (**σ²**)	**VAR.P** (Address of First Data Cell : Address of Last Data Cell)	VAR.P(A3:A10)
Power	**POWER** (number to be raised, power)	POWER (2,5) gives 2^5 which is 32
Quartile1	**QUARTILE.EXC** (Array, **1**)	QUARTILE.EXC (A1:A10, **1**)
Quartile2	**QUARTILE.EXC** (Array, **2**)	QUARTILE.EXC (A1:A10, **2**)
Quartile3	**QUARTILE.EXC**(Array, **3**)	QUARTILE.EXC (A1:A10, **3**)
Range	**MAX** (Address of First Data Cell : Address of Last Data Cell) **- MIN** (Address of First Data Cell : Address of Last Data Cell)	MAX (A3:A10) - MIN(A3:A10)
Sample Coefficient of Variation	**100*(s / $\overline{x}$)**	100*STDEV.S (A3:A10) / AVERAGE (A3 : A10)
Sample Mean ($\overline{x}$)	**AVERAGE** (Address of First Data Cell : Address of Last Data Cell)	Average (A3:A10)
Sample size	**COUNT** (Address of First Data Cell : Address of Last Data Cell)	COUNT (A3 : A10)
Sample Standard Deviation (s)	**STDEV.S** (Address of First Data Cell : Address of Last Data Cell)	STDEV.S (A3:A10)
Sample Variance (s²)	**VAR.S** (Address of First Data Cell : Address of Last Data Cell)	VAR.S(A3:A10)
Square root	**SQRT** (number)	SQRT (9) gives 3
Sum	**SUM** (Address of First Data Cell : Address of Last Data Cell)	SUM (A1 : A10)