

Examples on some the excel functions

1- Math & Trig functions

No	Function	syntax	Description	Examples
1	ABS	ABS(number)	Evaluate 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				

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				
4				

2-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				

Some other examples on the statistical functions

Examples

- 1- Calculate the mean, median, variance, standard deviation and mode(s) for the following data

2, 3, 2, 2, 0, 2, 3, 6, 3, 2, 2, 4, 3, 1, 3, 3, 3, 2, 1, 5

To achieve this in excel put the data in a column (A1:A20) or row and use the following commands

=AVERAGE(A1:A20)

=MEDIAN(A1:A20)

=STDEV.S(A1:A20)

=STDEV.P(A1:A20)

=VAR.P(A1:A20)

=VAR.S(A1:A20)

2- Frequency Table (Frequency-example)

3- Probability distributions

If $X \sim N(2, 7)$, *then Calculate*

$$P(X < 1.5), \quad f(3), \quad P(X < k) = 0.25, \quad k ?$$

Some other examples on the mathematical functions

Example

Calculate $\exp(-1.5)$, $\text{Log}(25)$ and $\ln(25)$

Example on the logical functions

Use if statement to print the status of the student ($Pass \geq 60$, $fail < 60$)

In creation exam using the following marks

Marks

70

85

83

25

80

98

80

72

42

If(A1<60,"F","P")

