Number Representation on Spreadsheet-II

Spreadsheet Formulas and Functions

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Outline

Objectives

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- Study on Spreadsheet Formulas
- Study on Spreadsheet Functions

Introduction

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- The automated calculation part are solved by easy process with help of formulas and functions.
- These are special pattern of text format to perform specific task in a cell
- It improve the automated task performance for a large amount of records.
- Formulas and functions take arguments as text or numbers directly into the formulas or could use cell references, so the formula will use whatever data the referenced cells contain.
- Data range (by colon symbol in list or database form) and reference value (by cell name and separated by comma symbol) are provided to the formulas and functions.

Spreadsheet Formulas

Spreadsheet Formulas

- Formula is a specific format of text written inside cell followed by an equal symbol (=) and performs specific calculations.

Table 1: Spreadsheet General Formulas

Formula	Arguments	Description
$= 2 + 3 + 4$	Simple Numeric	Add three numeric and produc result as 9.
$= A2 + B5$	Reference argument	Add two refered value
$= A2 + \$B\$5$	Absolute argument	$B5$ is fixed for all row when it is copied
$= sum(12, 25) + 50$	Function and numeric	Function output will be added with numeric

Spreadsheet Functions[1], [2], [3]

The predefined formulas, which takes some argument in parenthesis in form of text, numeric, reference, logical value etc. as argument in it, produces specific calculations on argument called as spredsheet function.

Spreadsheet Functions

1. Date and Time functions
2. Text functions
3. Mathematical functions
4. Logical functions
5. Statistical functions
6. Financial functions
7. Database functions
8. Lookup and Reference Functions

Date and Time Function

Table 2: Date and Time Function

Function	Example	Description
today()	$= today() + 5$	Display todays date
now()	$= now()$	Display present system time
date()	$= date(YY, MM, DD)$	Convert into date format MM/DD/YY

Text Function

Table 3: Date and Time Functions

Function	Example	Description
concatenate()	$= concatenate(\text{"}RAM\text{"}, \text{"}LAL\text{"})$	Join two string
len()	$= len(\text{"}RAMLAL\text{"})$	Return length of string
left()	$= left(\text{"}RAMLAL\text{"}, 4)$	Return 4 character from left
right()	$= right(\text{"}RAMLAL\text{"}, 4)$	Return 4 character from right

Mathematical Function

Table 4: Date and Time Functions

Function	Example	Description
abs()	$= abs(-5)$	Returns positive 5
acos()	$= acos(-1)$	Returns inverse trigonometric cosine of a number in radian
cos()	$= cos(12)$	Returns trigonometric cosine of a number in radian
ceiling()	$= ceiling(20.3)$	Returns ceining value i.e. 21
floor()	$= floor(20.3)$	Returns floor value i.e. 20
round()	$= round(x)$	Returns round value
power()	$= power(a, b)$	Returns power of a raised to b
odd()	$= odd(4.2)$	Returns nearest odd value

Logical Function

Table 5: Date and Time Functions

Function	Example	Description
AND()	$= AND(12 < 13, 14 > 12, 7 < 6)$	Returns logical FALSE
OR()	$= OR(12 < 13, 14 > 12, 7 < 6)$	Returns logical TRUE
true()	$= true()$	Returns TRUE logical value
false()	$= false()$	Returns FALSE logical value
if()	$= if(a5 > 50, "PASS", "FAIL")$	Display logical conclusion

Statistical Function

Table 6: Statistical Functions

Function	Example	Description
max()	$= max(A2 : A8)$	Returns maximum value between A2 to A8
min()	$= min(A2 : A8)$	Returns minimum value between A2 to A8
sum()	$= sum(A2 : A8)$	Returns sum of cells from A2 to A8
average()	$= average(A2 : A8)$	Returns average of cells
count()	$= count(A2 : A8)$	Returns total number of numeric value in list

Financial Function

Table 7: Financial Functions

Function	Example	Description
sln()	$= sln(3000, 750, 10)$	Returns the straight-line depreciation of an asset for one period.
rri()	$= rri(4, 7500, 10000)$	Calculates the interest rate resulting from the profit (return) of an investment i.e. 7.46%
fv()	$= fv(4, 2, 1000)$	Returns the future value of an investment based on periodic, constant payments and a constant interest rate (Future Value) and i.e. 2040/-

$$SLN = \frac{Cost\ of\ Asset - Salvage}{Useful\ Life\ of\ Asset} \tag{1}$$

Exercise

- Explain formulas in spreadsheet with suitable examples.
- Wha is is function in spreadsheet software? How many kind of it?
- Explain text, mathematical, logical, statistical functions in spreadsheet.

References I


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Thank You...