

Spreadsheets

Extracting & Concatenate

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Objectives

To understand the use of the Left, Right and Mid Function.

To understand how to concatenate multiple values into one cell.

To understand the use of the Value Function to extract values from a text string.

Outcomes

Time

Pupils will complete the following activities:

- Task 1: Extracting Characters (LEFT, RIGHT, MID)
- Task 2: CONCATENATE
- Task 3: UPPER & LOWER
- Task 4: VALUE Function

Task 1 - Extracting Characters

Employee ID	Extract Left 2 Characters	=LEFT(A6,2)	=LEFT (Function)
ABA343576	AB	=LEFT(A6,2)	LEFT(text, [num chars])

Returns the specified number of characters from the start of a text string

Employee ID	Extract Left 2 Characters	Extract Right 2 Characters	=RIGHT(A6,2)	=RIGHT (Function)
ABA343576	AB	76	=RIGHT(A6,2)	RIGHT(text, [num chars])

Returns the specified number of characters from the end of a text string

Employee ID	Extract Left 2 Characters	Extract Right 2 Characters	Extract Mid (4,2)	Extract Mid (4,2)	&	Conca
ABA343576	AB	76	=MID(A6,4,2)	=MID(A6,4,2)		AB763

Start position is 4

MID(text, start num, num_chars)

Returns the characters from the middle of a text string, given a starting position and length

Task 2- Concatenate Values

& is used to combine text from multiple cells into one cell

Employee ID	Extract Left 2 Characters	Extract Right 2 Characters	Extract Mid (4,2)	&
ABA343576	AB	76	34	=B6&C6&D6

=CONCATENATE (Function) Joins several text strings into one text string

Employee ID	Extract Left 2 Characters	Extract Right 2 Characters	Extract Mid (4,2)	&	Concatenate
ABA343576	AB	76	34	AB7634	=CONCATENATE(B6,C6,D6)

Extracting Functions and **&** can be used to combine text from multiple cells.

Employee ID	Extract Left 2 Characters	Extract Right 2 Characters	Extract Mid (4,2)	&	Concatenate	Join
ABA343576	AB	76	34	AB7634	AB7634	=LEFT(A6,1)&MID(A6,3,1)&MID(A6,5,1)

=LEFT(A6,1)&MID(A6,3,1)&MID(A6,5,1)

1, 3, 5 characters extracted

AA4

Task 2- Concatenate Values

+ is used to **add values** extracted from multiple cells into one cell

	A	B	C	D	E	
13						
14				Add		
15	Numbers			First Character	Middle 2 Characters	Last Character
16	4353	2324	3535	=LEFT(A16,1)+LEFT(B16,1)+LEFT(C16,1)		
17	2155	5225	5152	LEFT(text, [num chars])		
21						
22	Join all the words to form a simple sentence in the yellow cell.					
23	mat.	The	sat	cat	the	on
24	=CONCATENATE(B23," ",D23," ",C23," ",F23," ",E23," ",A23)					
25						



CONCATENATE

Joins several text strings into one text string

=CONCATENATE(

CONCATENATE(text1, [text2], ...)

Values are separated by **speech marks**

Task 2- Concatenate Values

34			Enter a formula to show the values on the left.	
35	Value A	4		The Value of A is 4
36	Value B	6		The Value of B is 6
37	Value C	2		The Value of C is 2
38				A + B = 10
39				A + B + C = 12
40				A * B + C = 26
41				A * B * C / 2 = 24



Text String is in "" → `= "The Value of A is " & B35` ← **Cell Value**

Text Strings in speech marks can also be joined (CONCATENATED) with values or calculations from cells.

<code>= "The Value of A is " & B35</code>
<code>= "The Value of B is " & B36</code>
<code>= "The Value of C is " & B37</code>
<code>= "A + B = " & B35 + B36</code>
<code>= "A + B + C = " & B35 + B36 + B37</code>
<code>= "A * B + C = " & (B35 * B36) + B37</code>
<code>= "A * B * C / 2 = " & (B35 * B36 * B37) / 2</code>

Task 3- Upper and Lower Function



UPPER

Converts a text string to all uppercase letters

Upper and Lower Functions					
First Name	Surname	Example 1	Example 2	Example 3	Example 4
Yasar	Ahmad	Y Ahmad	AHMAD: Yasar	Yasar A	A --yas
Billy	Jones		BILLY: Jones		

Billy

Jones

=UPPER(A61)&"": "&B61



LOWER

Converts all letters in a text string to lowercase

Upper and Lower Functions					
First Name	Surname	Example 1	Example 2	Example 3	Example 4
Yasar	Ahmad	Y Ahmad	AHMAD: Yasar	Yasar A	A --yas
Billy	Jones		BILLY: Jones		B--jon

=LEFT(A61,1)&"--"&LOWER(LEFT(B61,3))

Task 4- Value Function

Text String →	Item Code	Extract	Item Code	
		Green Values	Green Values	
	A21AAB30CCC119	=VALUE(MID(A70,2,2))	A21AAB30CCC119	21

Numbers would have to be extracted as a value to match the values in the table array.

Item Code	Item Name	Price	Shop Name	Branch & Manger
A21AAB30CCC119				
A23AAC32CCC193				

Item Name	Item Price	Shop Name	Branch	Manager
12 Milk	20 £ 0.50	119 ASDA	AAA Stretford	Mr Jones
32 Bread	21 £ 0.75	129 Tesco	AAB Sale	Mr Ahmed
18 Eggs	22 £ 0.65	193 Aldi	AAC Urmston	Ms Smith
30 Water	23 £ 0.45	120 Lulu	AAD Old Trafford	Mr Khan

Values

Item Code	Item Name	Price	Shop Name	Branch & Manger
A21AAB30CCC119				
A23AAC32CCC193				

Item Name	Item Price
12 Milk	20 £ 0.50
32 Bread	21 £ 0.75
18 Eggs	22 £ 0.65
30 Water	23 £ 0.45

Extracted values can be used to lookup table arrays.

=VLOOKUP(VALUE(MID(A74,2,2)), \$D\$78:\$E\$81, 2, FALSE)

Plenary – Refer to the Lesson Objectives

Objectives

To understand the use of the Left, Right and Mid Function.

To understand how to concatenate multiple values into one cell.

To understand the use of the Value Function to extract values from a text string.

Plenary Task

1. Review the use of the following functions:

- LEFT, RIGHT, MID
- CONCATENATE
- UPPER & LOWER
- VALUE