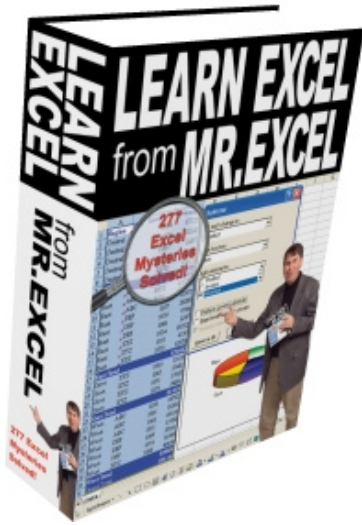




Free Preview – Week #14
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This week, tips on text. How to join text from two columns using the concatenation key, then, how to use LEFT(), MID(), FIND() and LEN() to isolate portions of an account ID.

Strategy: Use the ampersand (&) as a concatenation operator in a formula in column C. Change the formulas in column C to values before deleting columns A and B. Follow these steps.

- 1) In cell C2, enter the formula =A2&B2, as shown in Fig. 258.

C2		fx =A2&B2	
	A	B	C
1	FIRST	LAST	Name
2	BRITNEY	SPEARS	BRITNEYSPEARS
3	PAUL	MCCARTNEY	

Fig. 258

- 2) You need to insert a space between the first name and last name. If you join cell A2, a space in quotes, and cell B2, the answer will look acceptable. The formula is =A2&" "&B2. Copy this formula down to all of the cells in your range, as shown in Fig. 259.

C2		fx =A2&" "&B2	
	A	B	C
1	FIRST	LAST	Name
2	BRITNEY	SPEARS	BRITNEY SPEARS
3	PAUL	MCCARTNEY	PAUL MCCARTNEY
4	BILL	JELEN	BILL JELEN
5	JON	TESSMER	JON TESSMER
6	SUSAN	HALLORAN	SUSAN HALLORAN

Fig. 259

Additional Information: To convert BRITNEY SPEARS to Britney Spears, use the PROPER function. =PROPER(A2&" "&B2) will convert the names to Proper Case, as shown in Fig. 260. This will work for all of your names except names with an interior capital such as “Paul McCartney” or “Dave VanHorn”. After using the PROPER function, you will have to manually fix any names with an interior capital letter.

	C2		=PROPER(A2&" "&B2)
	A	B	C
1	FIRST	LAST	Name
2	BRITNEY	SPEARS	Britney Spears
3	PAUL	MCCARTNEY	Paul Mccartney
4	BILL	JELLEN	Bill Jelen

Fig. 260

Gotcha: If you delete columns A and B while column C still contains formulas, then all of the formulas will change to #REF! errors, as shown in Fig. 261. This tells you that you have a formula that points to cell(s) that are no longer there. Immediately hit Ctrl+Z to undo the delete.

Part II

	A2		=#REF!&" "&#REF!
	A	B	C
1	Name		
2	#REF!		
3	#REF!		

Fig. 261

To work around this situation, first convert all of the formulas in column C to values. Follow these steps:

- 1) Select the data in column C.
- 2) Select Ctrl+C to copy the data to the clipboard.
- 3) Without changing the selection, select Edit – Paste Special....

- 4) In the Paste Special dialog box, choose Values and then OK, as shown in Fig. 262.

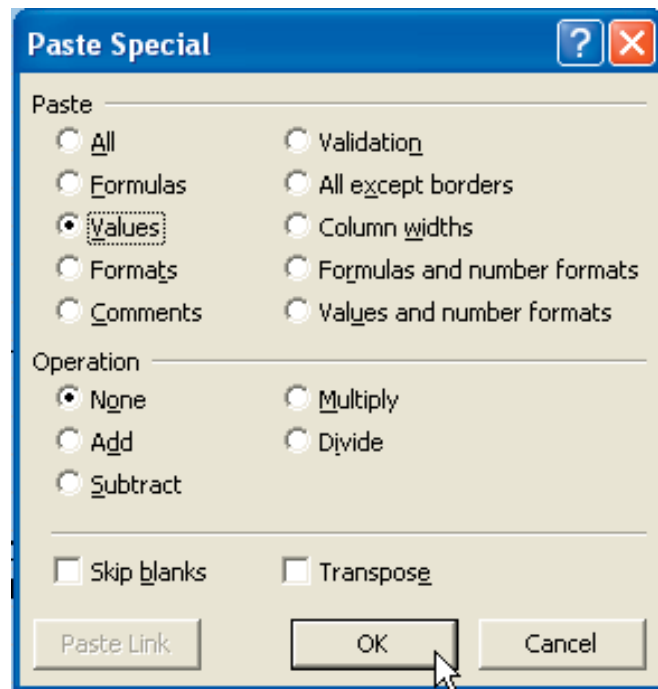


Fig. 262

- 5) This converts column C from live formulas to static values. You can now delete columns A and B.

Summary: The ampersand (&) is the concatenation character used to join text cells with other text cells or with literal values in a formula.

Commands Discussed: Edit – Paste Special

Functions Discussed: =PROPER()

HOW TO SORT ON ONE SEGMENT OF AN ACCOUNT ID

Problem: Your company assigns an account ID to every customer. One segment of the account ID contains useful information, such as a parent company code. You want to be able to sort on the basis of a portion of the account ID. In Fig. 263, the first three digits of the account are used to identify an office.

	A	B	C	D	E	F
1	Account	Product	Jan	Feb	Mar	Q1
2	4010	XYZ	37	82	12	131
3	4021	ABC	89	20	69	178
4	4030	XYZ	73	90	62	225
5	4030	ABC	55	26	23	104
6	4030	GHI	33	0	25	58
7	4030	GHI	25	95	40	160
8	4030	XYZ	20	50	97	167
9	4030	DEF	50	21	74	145

Fig. 263

Strategy: Insert a new column and use the LEFT function to isolate the necessary digits from the account field.

- 1) In the blank column, enter a heading such as the word “Key”. In cell G2, enter the formula =LEFT(A2,3), as shown in Fig. 264. This indicates that the new field should contain just the three characters leftmost of the ID field.

fx =LEFT(A2,3)			
E	F	G	
Mar	Q1	Key	
12	131	401	
69	178		
62	225		
23	104		
25	58		

Fig. 264

- 2) Double-click the Fill handle in cell G2 to copy the formula down to all of the rows in your dataset. The Fill handle is the black square dot in the lower right corner of the cell pointer.
- 3) Change the formulas in column G to values.

Highlight all of the cells in column G. Use Ctrl+C to copy. As shown in Fig. 265, from the menu, select Edit – Paste Special – Values – OK.

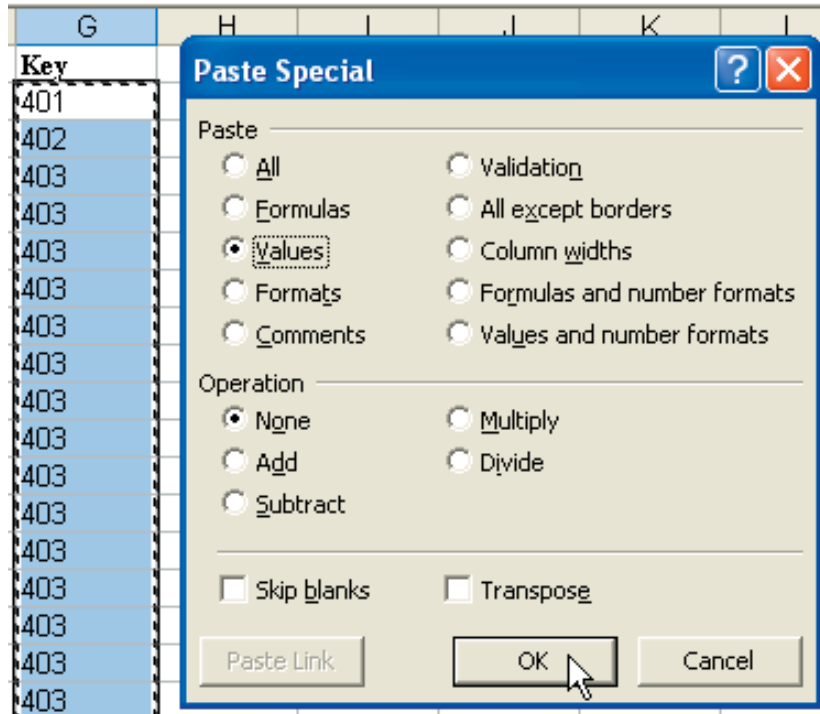


Fig. 265

Result: A certain portion of the Account field is now available in a new column. You can now use data tools, such as Sort, Filter, or Subtotal, to isolate certain offices.

Summary: When you need to isolate a portion of the characters in another column, creating a temporary column is the solution.

Commands Discussed: Edit – Paste Special

Functions Discussed: =LEFT()

HOW TO ISOLATE THE CENTER PORTION OF AN ACCOUNT ID

Problem: Your company assigns an account ID in the format of SSS-XX-YYYY as shown in Fig. 266. You need to isolate the XX portion of the account ID in order to subtotal or sort the data.

	A	B	C	D	E	F
1	Account	Product	Jan	Feb	Mar	Q1
2	668-50-3295	XYZ	93	94	85	272
3	126-70-6950	DEF	99	79	87	265
4	620-60-3797	GHI	79	67	98	244
5	844-50-3736	XYZ	99	69	76	244
6	546-60-1875	ABC	65	81	93	239
7	417-70-3488	DEF	63	95	80	238
8	516-70-6693	ABC	68	62	99	229
9	221-60-1082	DEF	61	99	67	227
10	672-50-8695	XYZ	36	96	94	226

Fig. 266

Strategy: Insert a new column and use the MID function to isolate the necessary digits from the account field.

The MID function takes three arguments. The first argument is a cell containing a text value. The second argument is the character number where you want the result to start. The final argument is the length of the result.

In a well-formed account number, like 123-45-6789, you can predict that the start of the second segment will always be in the fifth character position. The length of the second segment is always two characters.

In a blank column, enter a heading, such as the word “Key”. In cell G2, enter the formula =MID(A2,5,2). Copy the formula down to all rows, as shown in Fig. 267.

G2		f ₈ =MID(A2,5,2)					
	A	B	C	D	E	F	G
1	Account	Product	Jan	Feb	Mar	Q1	Key
2	668-50-3295	XYZ	93	94	85	272	50
3	126-70-6950	DEF	99	79	87	265	70
4	620-60-3797	GHI	79	67	98	244	60
5	844-50-3736	XYZ	99	69	76	244	50

Fig. 267

Additional Details: In order to capture the final four digits of the account number, you could either use the =MID(A2,8,4) or the =RIGHT(A2,4) function to isolate the final four digits of the account number.

Result: You can now sort by the new column and add subtotals by this field.

Summary: When you need to isolate a portion of the characters in another column, creating a temporary column is the solution.

Functions Discussed: =MID(); =RIGHT()

Cross Reference: How to Sort on One Segment of an Account ID

HOW TO ISOLATE EVERYTHING BEFORE A DASH IN A COLUMN BY USING FUNCTIONS

Problem: A vendor provides an Excel worksheet. As shown in Fig. 268, one field has a manufacturer code, a dash, and a part number. The manufacturer codes are not always the same length. You need to isolate the manufacturer code in a new column.

	A	B	C	D	E
1	Item	Jan	Feb	Mar	Q1
2	KO-4679855	93	94	85	272
3	CISCO-85590	99	69	76	244
4	TLXN-859	36	96	94	226
5	KO-9694625	80	66	70	216
6	KO-3664228	86	55	74	215
7	MSFT-4904	59	76	76	211
8	KO-5013563	91	70	45	206
9	A-54306	40	92	72	204
10	A-40674	68	43	93	204
11	MSFT-7791	43	70	85	198
12	TLXN-762	34	98	63	195
13	KO-8515183	60	88	39	187

**Part
II**

Fig. 268

Strategy: Use the FIND function to locate the dash in the item number. The FIND function will return the character position of the dash. You can then use that result minus one in the LEFT function to isolate the manufacturer code.

The FIND function requires two arguments. The first argument is the text that you are trying to locate. In this case, you are trying to locate a dash, so you should include the dash in quotes. The second argument is the location of the cell containing the text to search.

- 1) Enter =FIND("-",A2) in cell F2. Copy down to all of the other cells, as shown in Fig. 269.

F2		fx =FIND("-",A2)				
	A	B	C	D	E	F
1	Item	Jan	Feb	Mar	Q1	Find
2	KO-4679855	93	94	85	272	3
3	CISCO-85590	99	69	76	244	6
4	TLXN-859	36	96	94	226	5

Fig. 269

The 3 in cell F2 indicates that the dash is located in the third character position of cell A2. The 6 in cell F3 indicates that the dash is in the sixth position of cell A3. If you want to isolate the manufacturer code, you will want to grab one less than this number from the left of the code.

- 2) In cell G2, enter the formula =LEFT(A2,F2-1), as shown in Fig. 270. Double-click the Fill handle to copy this formula down to all cells.

G2		fx =LEFT(A2,F2-1)					
	A	B	C	D	E	F	G
1	Item	Jan	Feb	Mar	Q1	Find	Manufacturer
2	KO-4679855	93	94	85	272	3	KO
3	CISCO-85590	99	69	76	244	6	CISCO
4	TLXN-859	36	96	94	226	5	TLXN
5	KO-9694625	80	66	70	216	3	KO

Fig. 270

Alternate Strategy: You do not need to enter the formulas in two different columns. You could easily have used this formula in cell F2:

=LEFT(A2,FIND("-",A2)-1)

Additional Details: Once the formula has isolated the manufacturer code, change the formulas to values. See the Cross Reference.

Result: You can now sort by the new column and add subtotals by this field.

Summary: When you need to isolate a portion of the characters in another column, creating a temporary column is the solution.

Functions Discussed: =FIND(); =LEFT()

Cross Reference: How to Sort on One Segment of an Account ID

HOW TO USE FUNCTIONS TO ISOLATE EVERYTHING AFTER A DASH IN A COLUMN

Problem: A vendor provides an Excel worksheet. One field has a manufacturer code, a dash, and a part number, as shown in Fig. 271. The manufacturer codes are not always the same length. You need to isolate the part number in a new column.

	A	B	C	D	E
1	Item	Jan	Feb	Mar	Q1
2	KO-4679855	93	94	85	272
3	CISCO-85590	99	69	76	244
4	TLXN-859	36	96	94	226
5	KO-9694625	80	66	70	216
6	KO-3664228	86	55	74	215
7	MSFT-4904	59	76	76	211
8	KO-5013563	91	70	45	206
9	A-54306	40	92	72	204
10	A-40674	68	43	93	204
11	MSFT-7791	43	70	85	198
12	TLXN-762	34	98	63	195
13	KO-8515183	60	88	39	187

Fig. 271

Strategy: Use the MID function to extract a portion of text from the middle of the text. The MID function requires three arguments: =MID(Cell with Text, Character Number to Start, Number of Characters). You can use the FIND function to locate the dash in the item number and start at one character to the right. You can use the LEN function to figure out how long the text is.

The FIND function requires two arguments. The first argument is the text that you are trying to locate. In this case, you are trying to locate a dash, so you should include the dash in quotes. The second argument is the location of the cell containing the text to search.

- 1) Enter =FIND("-",A2) in cell F2. Copy down to all of the other cells, as shown in Fig. 272.

	F2						
	A	B	C	D	E	F	G
1	Item	Jan	Feb	Mar	Q1	Find	
2	KO-4679855	93	94	85	272	3	
3	CISCO-85590	99	69	76	244	6	
4	TLXN-859	36	96	94	226	5	

Fig. 272

The 3 in cell F2 indicates that the dash is located in the third character position of cell A2. If you want to isolate the part number, you will want to start one character to the right of this position. So, you know the start of your formula will be =MID(A2,F2+1. The hard part is figuring out how many characters there are in the part number.

- 2) In cell G2, enter the formula =LEN(A2). Copy this formula down to all rows, as shown in Fig. 273.

G2		fx =LEN(A2)					
	A	B	C	D	E	F	G
1	Item	Jan	Feb	Mar	Q1	Find	Length
2	KO-4679855	93	94	85	272	3	10
3	CISCO-85590	99	69	76	244	6	11
4	TLXN-859	36	96	94	226	5	8
5	KO-9694625	80	66	70	216	3	10
6	KO-3664228	86	55	74	215	3	10

Fig. 273

The LEN function will tell you the total number of characters in cell A2. Cell G2 tells you that there are 10 characters in A2. If the dash is in the third position, then you want to grab (G2–F2) characters or (10–3). This will give you seven characters.

- 3) In cell H2, enter the formula =MID(A2,F2+1,G2–F2), as shown in Fig. 274. In plain language, this tells Excel to extract characters from A2. Excel should start at the character after the result in F2 and continue for a length of (G2–F2) characters.

H2		fx =MID(A2,F2+1,G2-F2)						
	A	B	C	D	E	F	G	H
1	Item	Jan	Feb	Mar	Q1	Find	Length	Item
2	KO-4679855	93	94	85	272	3	10	4679855
3	CISCO-85590	99	69	76	244	6	11	85590
4	TLXN-859	36	96	94	226	5	8	859
5	KO-9694625	80	66	70	216	3	10	9694625

Fig. 274

In this case, it is much harder to enter the formula in one column instead of three columns. This is because the result of the FIND function is used twice in the H2 formula. In order to build a single formula, you will be entering the FIND function twice in that formula. As shown in Fig. 275, you could have entered the following formula in H2: =MID(A2,FIND("-",A2)+1,LEN(A2)-FIND("-",A2)).

H2		fx =MID(A2,FIND("-",A2)+1,LEN(A2)-FIND("-",A2))									
	A	B	C	D	E	F	G	H	I		
1	Item	Jan	Feb	Mar	Q1	Find	Length	Item			
2	KO-4679855	93	94	85	272	3	10	4679855			
3	CISCO-85590	99	69	76	244	6	11	85590			

Fig. 275

**Part
II**

Alternate Strategy: You might be tempted to use a formula such as =MID(A2,F2+1,50). The third parameter, 50, will ensure that it can grab a part number of any conceivable length. This approach will work, but the resulting answer will have forty-four blanks appended to the end of the part number. This makes it impossible to use successfully in a VLOOKUP formula as it stands. However, you can use =TRIM(MID(A2,F2+1,50)) to remove the trailing spaces.

Summary: Use a combination of LEN and FIND functions as an aide to help you locate the proper start or end position for the LEFT, MID, and RIGHT functions.

Functions Discussed: =FIND(); =MID(); =LEN(); =TRIM()

HOW TO USE FUNCTIONS TO ISOLATE EVERYTHING AFTER THE SECOND DASH IN A COLUMN

Problem: A vendor file contains a three-segment part number, as shown in Fig. 276. Each segment is separated by a dash. The length of each segment could be any number of characters. Find the second or third segment.

	A	B	C	D	E
1	Item	Jan	Feb	Mar	Q1
2	KO-4679855-A34	93	94	85	272
3	CISCO-85590-B7	99	69	76	244
4	TLXN-859-A3	36	96	94	226
5	KO-9694625-B95	80	66	70	216
6	KO-3664228-A52	86	55	74	215

Fig. 276

Strategy: There is an optional third argument in the FIND function. This tells Excel to start looking after a certain character position in the text. In this case, to find the second dash, you want Excel to start looking after the location of the first dash.

- 1) As in the prior examples, use =FIND("-",A2) in cell F2 to locate the first dash.
- 2) Enter =FIND("-",A2,F2+1) in cell G2, as shown in Fig. 277. The F2+1 parameter tells Excel that you want to find a dash starting in the fourth character position of cell A2.

G2		fx =FIND("-",A2,F2+1)					
	A	B	C	D	E	F	G
1	Item	Jan	Feb	Mar	Q1	Dash1	Dash2
2	KO-4679855-A34	93	94	85	272	3	11
3	CISCO-85590-B7	99	69	76	244	6	12
4	TLXN-859-A3	36	96	94	226	5	9
5	KO-9694625-B95	80	66	70	216	3	11

Fig. 277

- 3) Enter =LEFT(A2,F2-1) in H2. The formula in H2 locates the first segment of the part number.
- 4) Enter =MID(A2,F2+1,G2-F2) in I2. The formula in I2 locates the middle segment of the part number.
- 5) To get the right segment of the part number, you can use the RIGHT function. Just like the LEFT function, the RIGHT function requires a cell and the number of characters from the right side of the item number. To find the number of characters, use =LEN(A2)-G2.

Enter the resulting formula, `=RIGHT(A2,LEN(A2)-G2)`, in J2. See Fig. 278.

	J2	fx =RIGHT(A2,LEN(A2)-G2)								
	A	B	C	D	E	F	G	H	I	J
1	Item	Jan	Feb	Mar	Q1	Dash1	Dash2	Item1	Item2	Item3
2	KO-4679855-A34	93	94	85	272	3	11	KO	4679855	A34
3	CISCO-85590-B7	99	69	76	244	6	12	CISCO	85590	B7
4	TLXN-859-A3	36	96	94	226	5	9	TLXN	859	A3
5	KO-9694625-B95	80	66	70	216	3	11	KO	9694625	B95

Fig. 278

Gotcha: All of these formulas are trusting that the vendor always included two dashes in the item number. If an item number exists without a second dash, the second FIND function would return a #VALUE! error, leading to errors in the calculation for the second and third items. Before converting formulas to values and deleting the original part number, sort the data by column F and then sort descending by column G. As shown in Fig. 279, any #VALUE! errors will sort to the top of the data-set, where you can locate and correct the errors in the part number.

Part II

	A	B	C	D	E	F	G	H	I	J
1	Item	Jan	Feb	Mar	Q1	Dash1	Dash2	Item1	Item2	Item3
2	KO-4679855A34	93	94	85	272	3	#VALUE!	KO	#VALUE!	#VALUE!
3	CISCO-85590-B7	99	69	76	244	6	12	CISCO	85590	B7
4	TLXN-859-A3	36	96	94	226	5	9	TLXN	859	A3

Fig. 279

Summary: Using combinations of FIND, LEN, MID, LEFT, and RIGHT, it is possible to parse nearly any data imaginable.

Functions Discussed: =FIND(); =LEN(); =MID(); =LEFT(); =RIGHT()