

Excel Tips and Tricks

TH 4.4

CONFERENCE D – 2:50-3:40 PM

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TODAY WE WILL TOUCH ON EVERY LEVEL



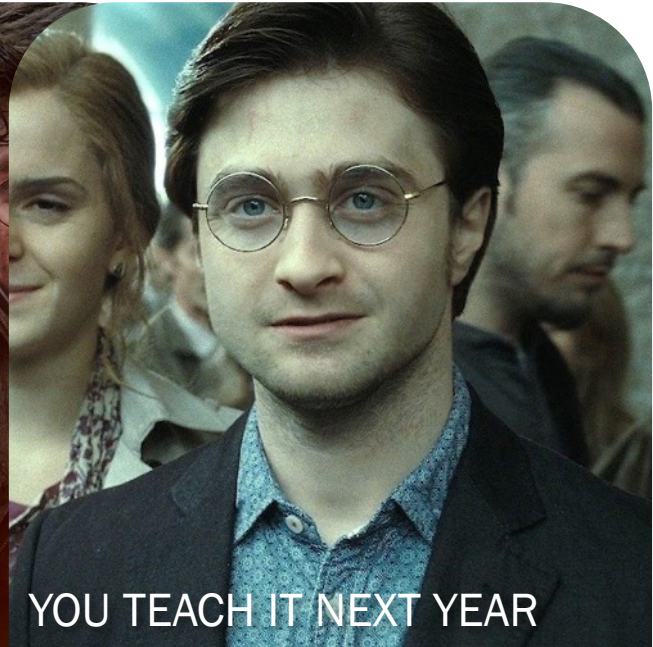
BEGINNER



INTERMEDIATE



ADVANCED



YOU TEACH IT NEXT YEAR



BEGINNER

IN WHICH WE FIND OUR WAY
OUT OF THE CUPBOARD

THE RIGHT METAPHOR

TABLE



THE RIGHT METAPHOR

ROOM



THE RIGHT METAPHOR

ceiling

	A	B	C
1	Coin	Value	# in a Dollar
2	Penny	\$0.01	100
3	Nickel	\$0.05	20
4	Dime	\$0.10	10
5	Quarter	\$0.25	4
6	Silver Dollar	\$1.00	1, duh

walls



contents

THE RIGHT METAPHOR

ceiling

**MOST OF OUR EXCEL ERRORS
STEM FROM A MISGUIDED BELIEF
THAT EXCEL IS SOME SORT OF
MAGICAL ARCHITECT**

contents



THE RIGHT METAPHOR

**EXCEL WILL ONLY AND ALWAYS DO
WHAT WE TELL IT TO DO**

MAGICAL

contents

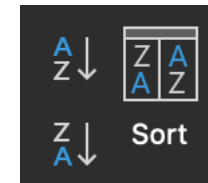


THE LEAKY CEILING

PART ONE

	A	B	C	D
1	Holiday	Month		Favorite Part
2	Easter	April	9	Candy
3	Christmas	December	25	Presents
4	MLK Day	January	16	Stories
5	Thanksgiving	November	23	Turkey
6	Valentine's Day	February	14	Kisses
7	Independence Day	July	4	Flags
8	Labor Day	September	4	Vacation
9	Memorial Day	May	29	Vacation
10	Halloween	October	31	Candy

What happens when you sort this table by Holiday?

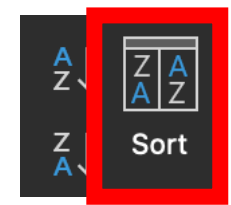


THE LEAKY CEILING

PART ONE

	A	B	C	D
1	Holiday	Month		Favorite Part
2	Easter	April	9	Candy
3	Christmas	December	25	Presents
4	MLK Day	January	16	Stories
5	Thanksgiving	November	23	Turkey
6	Valentine's Day	February	14	Kisses
7	Independence Day	July	4	Flags
8	Labor Day	September	4	Vacation
9	Memorial Day	May	29	Vacation
10	Halloween	October	31	Candy

What happens when you sort this table by Holiday?



Add levels to sort by: My list has headers

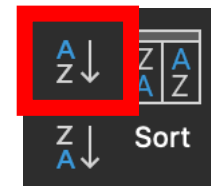
Column	Sort On	Order	Color/Icon
Sort by	Values	A to Z	

THE LEAKY CEILING

PART ONE

	A	B	C	D
1	Holiday	Month		Favorite Part
2	Easter	April	9	Candy
3	Christmas	December	25	Presents
4	MLK Day	January	16	Stories
5	Thanksgiving	November	23	Turkey
6	Valentine's Day	February	14	Kisses
7	Independence Day	July	4	Flags
8	Labor Day	September	4	Vacation
9	Memorial Day	May	29	Vacation
10	Halloween	October	31	Candy

What happens when you sort this table by Holiday?



THE LEAKY CEILING

PART ONE

	A	B	C	D
1	Christmas	December	25	Presents
2	Easter	April	9	Candy
3	Halloween	October	31	Candy
4	Holiday	Month		Favorite Part
5	Independence Day	July	4	Flags
6	Labor Day	September	4	Vacation
7	Memorial Day	May	29	Vacation
8	MLK Day	January	16	Stories
9	Thanksgiving	November	23	Turkey
10	Valentine's Day	February	14	Kisses

What happens when you sort this table by Holiday?

It gets garbled because you had a leak in your ceiling.

Excel only identifies a Header Row if it is fully populated with contents.



THE LEAKY CEILING

PART ONE

If you see this, press
Control-Z
to undo and start
your detective work

	A	B	C	D
1	Christmas	December		25 Presents
2	Easter	April		9 Candy
3	Halloween	October		31 Candy
4	Holiday	Month		Favorite Part
5	Independence Day	July		4 Flags
6	Labor Day	September		4 Vacation
7	Memorial Day	May		29 Vacation
8	MLK Day	January		16 Stories
9	Thanksgiving	November		23 Turkey
10	Valentine's Day	February		14 Kisses

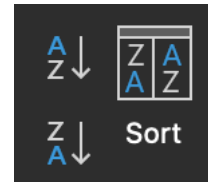
	A	B	C	D
1	Holiday	Month		Favorite Part
2	Easter	April		9 Candy
3	Christmas	December		25 Presents
4	MLK Day	January		16 Stories
5	Thanksgiving	November		23 Turkey
6	Valentine's Day	February		14 Kisses
7	Independence Day	July		4 Flags
8	Labor Day	September		4 Vacation
9	Memorial Day	May		29 Vacation
10	Halloween	October		31 Candy

THE LEAKY CEILING

PART TWO

	A	B	C	D	E
1	Holiday	Month	Day		Favorite Part
2	Easter	April	9		Candy
3	Christmas	December	25		Presents
4	MLK Day	January	16		Stories
5	Thanksgiving	November	23		Turkey
6	Valentine's Day	February	14		Kisses
7	Independence Day	July	4		Flags
8	Labor Day	September	4		Vacation
9	Memorial Day	May	29		Vacation
10	Halloween	October	31		Candy

What happens when you sort this table by Holiday?



THE LEAKY CEILING

PART TWO

	A	B	C	D	E
1	Holiday	Month	Day		Favorite Part
2	Christmas	December	25		Candy
3	Easter	April	9		Presents
4	Halloween	October	31		Stories
5	Independence Day	July	4		Turkey
6	Labor Day	September	4		Kisses
7	Memorial Day	May	29		Flags
8	MLK Day	January	16		Vacation
9	Thanksgiving	November	23		Vacation
10	Valentine's Day	February	14		Candy


What happens when you sort this table by Holiday?

Excel does exactly what you asked it to do.

It sorts the table it can identify by a consistent ceiling.



THE LEAKY CEILING PART TWO



	A	B	C	D	E
1	Holiday	Month	Day		Favorite Part
2	Christmas	December	25		Candy
3	Easter	April	9		Presents
4	Halloween	October	31		Stories
5	Independence Day	July	4		Turkey
6	Labor Day	September	4		Kisses
7	Memorial Day	May	29		Flags
8	MLK Day	January	16		Vacation
9	Thanksgiving	November	23		Vacation
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What happens when you sort this table by Holiday?

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PART TWO

	A	B	C	D	E
1	Holiday	Month	Day		Favorite Part
2	Easter	April	9		Candy
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6	Valentine's Day	February	14		Kisses
7	Independence Day	July	4		Flags
8	Labor Day	September	4		Vacation
9	Memorial Day	May	29		Vacation
10	Halloween	October	31		Candy

If you press

Control-Z

Excel will show you the
"table" it just sorted



THE LEAKY CEILING

PART TWO

	A	B	C
1	Holiday	Month	Day
2	Easter	April	
3	Christmas	December	
4	MLK Day	January	
5	Thanksgiving	November	
6	Valentine's Day	February	
7	Independence Day	July	
8	Labor Day	September	
9	Memorial Day	May	29
10	Halloween	October	31

In fact, every time I sort, my habit is

Control-Z

then

Control-Y

(Undo then Redo)

just to prove to myself there isn't some
brand new amazing way to befoul a
table Excel has devised and just not
told anyone about yet

If you press

Control-Z

Excel will show you the
"table" it just sorted



THE CRACKED WALL

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Zeke	Bratkowski	1963	1971	21
3	Irv	Comp	1943	1949	28
4	Lynn	Dickey	1976	1985	133
5	Brett	Favre	1992	2007	442
6	Arnie	Herber	1930	1940	66
7	Cecil	Isbell	1938	1942	61
8	Jack	Jacobs	1947	1949	21
9	Don	Majkowski	1987	1992	56
10	Bob	Monnett	1933	1938	28
11	Babe	Parilli	1952	1958	31
12					
13	Aaron	Rodgers	2005	2022	475
14	Tobin	Rote	1950	1956	89
15	Bart	Starr	1956	1971	152
16	David	Whitehurst	1977	1983	28
17	Randy	Wright	1984	1988	31

What happens when you sort this table by Touchdown Passes?



THE CRACKED WALL

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Brett	Favre	1992	2007	442
3	Lynn	Dickey	1976	1985	133
4	Arnie	Herber	1930	1940	66
5	Cecil	Isbell	1938	1942	61
6	Don	Majkowski	1987	1992	56
7	Babe	Parilli	1952	1958	31
8	Irv	Comp	1943	1949	28
9	Bob	Monnett	1933	1938	28
10	Zeke	Bratkowski	1963	1971	21
11	Jack	Jacobs	1947	1949	21
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13	Aaron	Rodgers	2005	2022	475
14	Tobin	Rote	1950	1956	89
15	Bart	Starr	1956	1971	152
16	David	Whitehurst	1977	1983	28
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What happens when you sort this table by Touchdown Passes?

Excel does exactly what you asked it to do.

It sorts the table it can identify by a consistent wall.



THE CRACKED WALL

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Brett	Favre	1992	2007	442
3	Lynn	Dickey	1976	1985	133
4	Arnie	Herber	1930	1940	66
5	Cecil	Isbell	1938	1942	61
6	Don	Majkowski	1987	1992	56
7	Babe	Parilli	1952	1958	31
8	Irv	Comp	1943	1949	28
9	Bob	Monnett	1933	1938	28
10	Zeke	Bratkowski	1963	1971	21
11	Jack	Jacobs	1947	1949	21
12					
13	Aaron	Rodgers	2005	2022	475
14	Tobin	Rote	1950	1956	89
15	Bart	Starr	1956	1971	152
16	David	Whitehurst	1977	1983	28
17	Randy	Wright	1984	1988	31



this

asked

ify by a



THE CRACKED WALL

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Zeke	Bratkowski	1963	1971	21
3	Irv	Comp	1943	1949	28
4	Lynn	Dickey	1976	1985	133
5	Brett	Favre	1992	2007	442
6	Arnie	Herber	1930	1940	66
7	Cecil	Isbell	1938	1942	61
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14	Tobin	Rote	1950	1956	89
15	Bart	Starr	1956	1971	152
16	David	Whitehurst	1977	1983	28
17	Randy	Wright	1984	1988	31

Control-Z

Excel will define your table to be **only as tall as it can justify through a consistent wall.**

Walls, after all, stop at the floor.



THE CRACKED WALL

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Zeke	Bratkowski	1963	1971	21
3	Irv	Comp	1943	1949	28
4	Lynn	Dickey	1976	1985	133
5	Brett	Favre	1992	2007	442
6	Arnie	Herber	1930	1940	66
7	Cecil	Isbell	1938	1942	61
8	Jack	Jacobs	1947	1949	21
9	Don	Majkowski	1987	1992	56
10	Bob	Monnett	1933	1938	28
11	Babe	Parilli	1952	1958	31
12	Aaron	Rodgers	2005	2022	475
14	Tobin	Rote	1950	1956	89
15	Bart	Starr	1956	1971	152
16	David	Whitehurst	1977	1983	28
17	Randy	Wright	1984	1988	31

Excel will define your table to be **only as tall as it can justify through a consistent wall.**

Even if the gap is super tiny.



THE CRACKED WALL

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Zeke	Bratkowski	1963	1971	21
3	Irv	Comp	1943	1949	28
4	Lynn	Dickey	1976	1985	133
5	Brett	Favre	1992	2007	442
6	Arnie	Herber	1930	1940	66
7	Cecil	Isbell	1938	1942	61
8	Jack	Jacobs	1947	1949	21
9	Don	Majkowski	1987	1992	56
10	Bob	Monnett	1933	1938	28
11	Babe	Parilli	1952	1958	31
13	Aaron	Rodgers	2005	2022	475
14	Tobin	Rote	1950	1956	89
15	Bart	Starr	1956	1971	152
16	David	Whitehurst	1977	1983	28
17	Randy	Wright	1984	1988	31

Excel will define your table to be **only as tall as it can justify through a consistent wall.**

**Even if the gap is super tiny.
Even if the gap is <gasp> hidden.**



THE CRACKED WALL

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Zeke	Bratkowski	1963	1971	21
3	Irv	Comp	1943	1949	28
4	Lynn	Dickey	1976	1985	133
5	Brett	Favre	1992	2007	442
6	Arnie	Herber	1930	1940	66
7	Cecil	Isbell	1938	1942	61
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9	Don	Majkowski	1987	1992	56
10	Bob	Monnett	1933	1938	28
11	Babe	Parilli	1952	1958	31
12	Aaron	Rodgers	2005	2022	475
13	Tobin	Rote	1950	1956	89
14		Starr			152
15	David	Whitehurst	1977	1983	28
16	Randy	Wright	1984	1988	31

Excel will tolerate **incomplete data** as long as there's a wall somewhere.

Here, the walls are in **B and E**.



THE CRACKED WALL

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Y	
2	Zeke	Bratkowski	1963	1	
3	Irv	Comp	1943	1	
4	Lynn	Dickey	1976	1	
5	Brett	Favre	1992	2	
6	Arnie	Herber	1930	1	
7	Cecil	Isbell	1938	1	
8	Jack	Jacobs	1947	1	
9	Don	Majkowski	1987	1	
10	Bob	Monnett	1933	1	
11	Babe	Parilli	1952	1	
12	Aaron	Rodgers	2005	2	
13	Tobin	Rote	1950	1	
14		Starr			
15	David	Whitehurst	1977	1	
16	Randy	Wright	1984	1	

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron	Rodgers	2005	2022	475
3	Brett	Favre	1992	2007	442
4		Starr			152
5	Lynn	Dickey	1976	1985	133
6	Tobin	Rote	1950	1956	89
7	Arnie	Herber	1930	1940	66
8	Cecil	Isbell	1938	1942	61
9	Don	Majkowski	1987	1992	56
10	Babe	Parilli	1952	1958	31
11	Randy	Wright	1984	1988	31
12	Irv	Comp	1943	1949	28
13	Bob	Monnett	1933	1938	28
14	David	Whitehurst	1977	1983	28
15	Zeke	Bratkowski	1963	1971	21
16	Jack	Jacobs	1947	1949	21

THE CRACKED WALL

	A	B	C	D	E
1	First Nam ▾	Last Nam ▾	First Ye ▾	Final Ye ▾	Touchdown Pass ▾
2	Zeke	Bratkowski	1963	1971	21
3	Irv	Comp	1943	1949	28
4	Lynn	Dickey	1976	1985	133
5	Brett	Favre	1992	2007	442
6	Arnie	Herber	1930	1940	66
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9	Don	Majkowski	1987	1992	56
10	Bob	Monnett	1933	1938	28
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14	Tobin	Rote	1950	1956	89
15	Bart	Starr	1956	1971	152
16	David	Whitehurst	1977	1983	28
17	Randy	Wright	1984	1988	31

FILTER STOPS HERE

A cracked wall will also erode any filters, because again, **Excel does exactly what you asked it to do.**

It filters the table it can identify by a consistent wall.



THE CRACKED WALL

	A	B	C	D	
1	First Name	Last Name	First Year	Final Year	Touchdown
2	Zeke	Bratkowski	1963	1971	
3	Irv	Comp	1943	1949	
4	Lynn	Dickey	1976	1985	
5	Brett	Favre	1992	2007	
6	Arnie	Herber	1930	1940	
7	Cecil	Isbell	1938	1942	
8	Jack	Jacobs	1947	1949	
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13	Aaron	Rodgers	2005	2022	
14	Tobin	Rote	1950	1956	
15	Bart	Starr	1956	1971	
16	David	Whitehurst	1977	1983	
17	Randy	Wright	1984	1988	

FILTER STOPS HERE

	A	B	C	D	E
1	First Name	Last Name	First Year	Final Year	Touchdown
2	Zeke				21
3	Irv				28
4	Lynn				133
5	Brett				442
6	Arnie				66
7	Cecil				61
8	Jack				21
9	Don				56
10	Bob				28
11	Babe				31
12					4
13	Aaron				475
14	Tobin				89
15	Bart				152
16	David				28
17	Randy				31
18					
19					
20					

First Name

Sort

By color:

Filter

By color:

Choose One

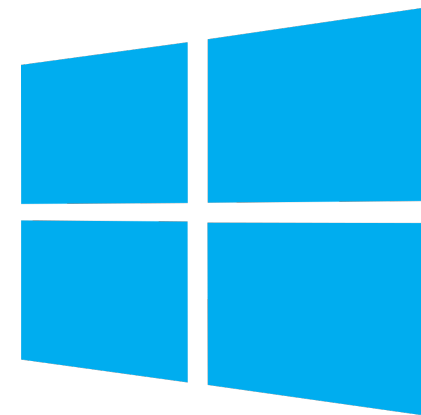
- (Select All)
- Aaron
- Arnie
- Babe
- Bart
- Bob
- Brett

Auto Apply

CEILING AND WALL SHORTCUTS



COMMAND-RIGHT
COMMAND-DOWN



CONTROL-END





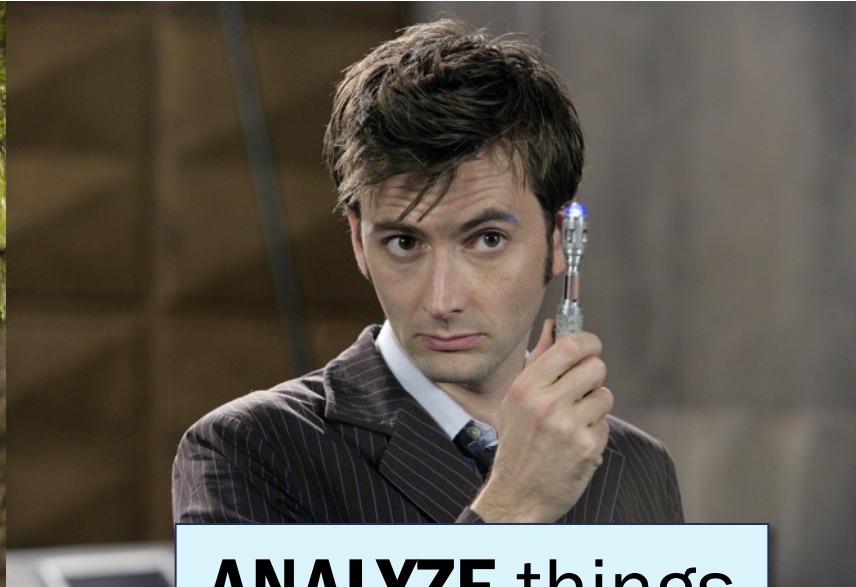
INTERMEDIATE

IN WHICH WE LEARN
OUR FIRST FEW SPELLS

THE CONTENTS OF OUR ROOM: 3 ACTIONS



FIND things



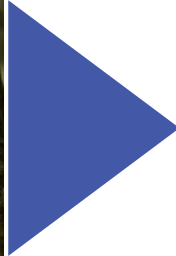
ANALYZE things



CREATE things



FINDING CONTENTS



SEARCH SOMEWHAT SAFELY

Yes, there is a =FIND function.

It's **TERRIFYING.**

Formula Builder ✕

Show All Functions

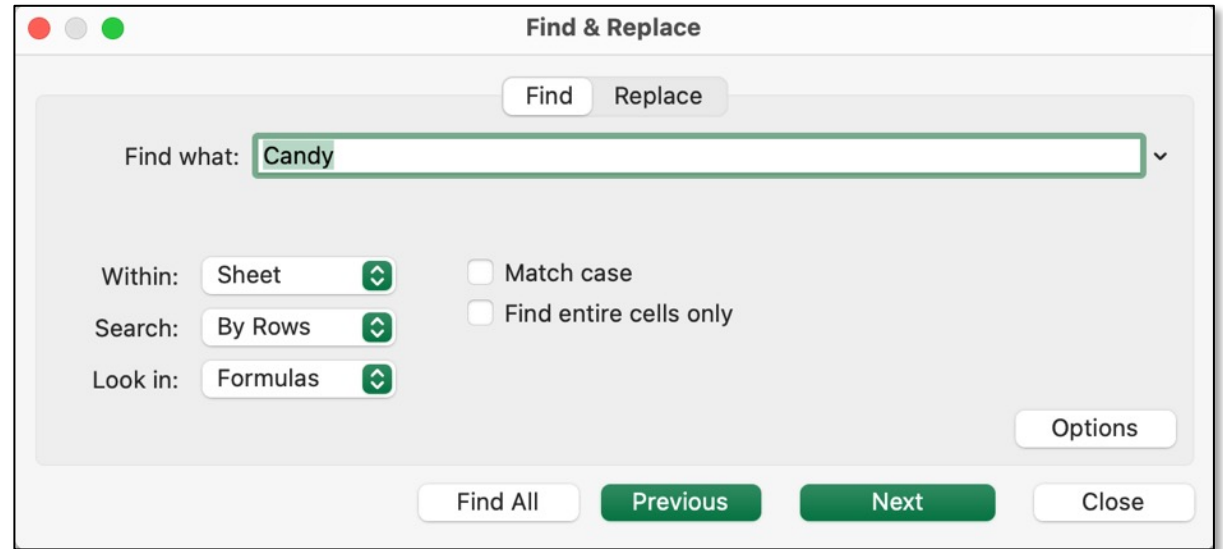
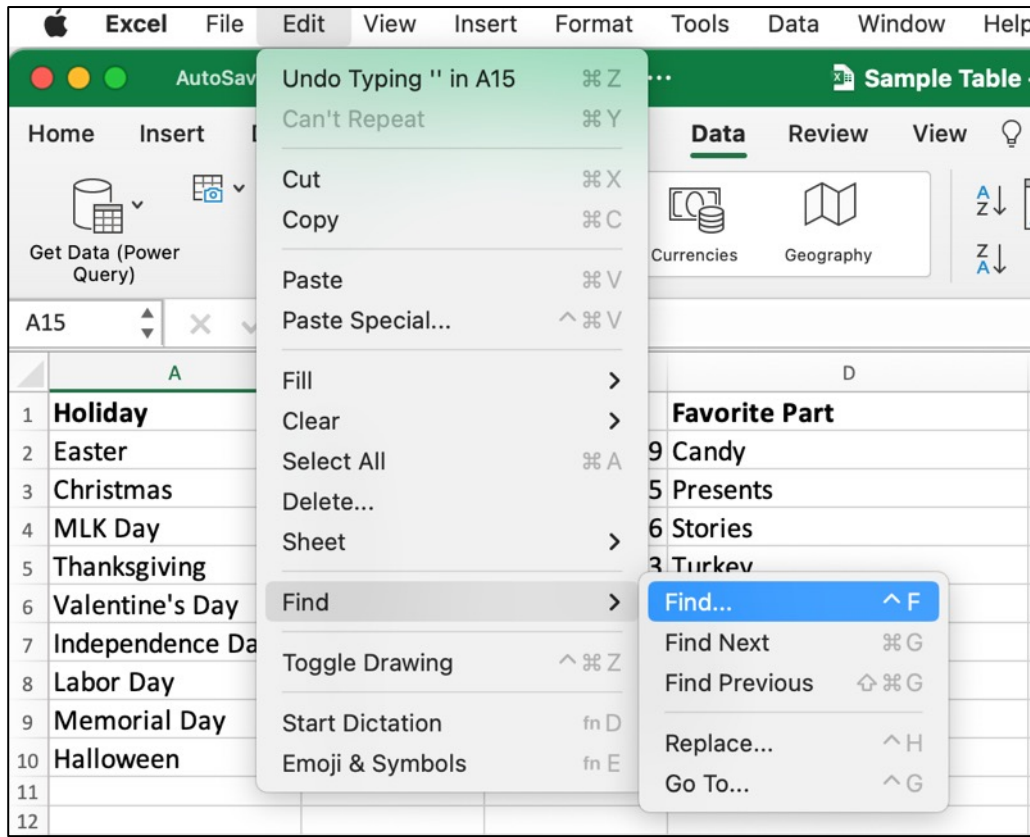
FIND

Find_text = text

Within_text = text

Start_num = number





Beware:
Excel will find
**what's typed in
the cell!**

D2 fx =IF(COUNTA(Sheet3!A2:A10)>0,VLOOKUP(Sheet1!A2,Sheet3!A:D,4,0),0)

	A	B	C	D	E
1	Holiday	Month	Day	Favorite Part	
2	Easter	April	9	Candy	
3	Christmas	December	25	Presents	
4	MLK Day	January	16	Stories	
5	Thanksgiving	November	23	Turkey	
6	Valentine's Day	February	14	Kisses	
7	Independence Day	July	4	Flags	
8	Labor Day	September	4	Vacation	
9	Memorial Day	May	29	Vacation	
10	Halloween	October	31	Candy	



Beware:
Excel will find
**what's typed in
the cell!**

Before searching,
Paste Values to
replace formulas
with the text they
return.

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
1	Holiday	Month	Day	Favorite Part	
2	Easter	April		9 Candy	
3	Christmas	December		25 Presents	

The formula bar for cell D2 contains: `=IF(COUNTA(Sheet3!A2:A10)>0,VLOOKUP(Sheet1!A2,Sheet3!A:D,4,0),0)`

The Paste menu is open, showing the following options:

- Paste
- Formulas
- Formulas & Number Formatting
- Keep Source Formatting
- No Borders
- Keep Source Column Widths
- Transpose
- Paste Values (highlighted)
- Values & Number Formatting
- Values & Source Formatting

The background shows a larger view of the spreadsheet with a list of holiday parts in column D:

Day	Favorite Part
9	Candy
25	Presents
16	Stories
23	Turkey
14	Kisses
4	Flags
4	Vacation
29	Vacation
31	Candy

FINDING CONTENTS



SEARCH SOMEWHAT SAFELY



FILTERS ARE YOUR FRIENDS

Filters will filter your data table down to **what you see**, formula or no formula

Blue row numbers means your data is filtered!

	A	B	C	D	E
1	Holiday	Month	Day	Favorite Part	
2	Easter	April		9 Candy	
10	Halloween	October		31 Candy	



FINDING CONTENTS



SEARCH SOMEWHAT SAFELY



FILTERS ARE YOUR FRIENDS



=UNIQUE

Excel 2021 introduced **=UNIQUE**, which summarizes the different values in a column

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H
1	Holiday	Month	Day	Favorite Part		2:D10,0,0		
2	Easter	April		9 Candy				
3	Christmas	December		25 Presents				
4	MLK Day	January		16 Stories				
5	Thanksgiving	November		23 Turkey				
6	Valentine's Day	February		14 Kisses				
7	Independence Day	July		4 Flags				
8	Labor Day	September		4 Vacation				
9	Memorial Day	May		29 Vacation				
10	Halloween	October		31 Candy				
11								
12								

The Formula Builder pane on the right shows the following configuration for the UNIQUE function:

- Function: UNIQUE
- Array: {"Candy";"Presents";"Stories";"Turkey"...}
- Input: D2:D10
- By_col: FALSE
- Input: 0
- Exactly_once: FALSE
- Input: 0

Excel 2021 introduced **=UNIQUE**, which summarizes the different values in a column

The screenshot shows an Excel spreadsheet with columns A through H. Column A is labeled 'Holiday', B is 'Month', C is 'Day', and D is 'Favorite Part'. The data in column D is: 9 Candy, 25 Presents, 16 Stories, 23 Turkey, 14 Kisses, 4 Flags, 4 Vacation, 29 Vacation, 31 Candy. Cell F2 contains the formula `=UNIQUE(D2:D10,0,0)`. The Formula Builder pane on the right shows the function name 'UNIQUE', the array 'D2:D10', and the 'By_col' and 'Exactly_once' options both set to FALSE.

Holiday	Month	Day	Favorite Part
Easter	April	9	Candy
Christmas	December	25	Presents
MLK Day	January	16	Stories
Thanksgiving	November	23	Turkey
Valentine's Day	February	14	Kisses
Independence Day	July	4	Flags
Labor Day	September	4	Vacation
Memorial Day	May	29	Vacation
Halloween	October	31	Candy



The screenshot shows the same Excel spreadsheet as above. Cell F2 now displays the unique values from column D: Candy, Presents, Stories, Turkey, Kisses, Flags, Vacation. The Formula Builder pane on the right remains the same, showing the function name 'UNIQUE', the array 'D2:D10', and the 'By_col' and 'Exactly_once' options both set to FALSE.

Holiday	Month	Day	Favorite Part
Easter	April	9	Candy
Christmas	December	25	Presents
MLK Day	January	16	Stories
Thanksgiving	November	23	Turkey
Valentine's Day	February	14	Kisses
Independence Day	July	4	Flags
Labor Day	September	4	Vacation
Memorial Day	May	29	Vacation
Halloween	October	31	Candy

Excel 2021 introduced **=UNIQUE**, which summarizes the different values in a ~~column~~

many columns

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K
1	First Name	Last Name	First Year	Final Year	Touchdown Passes		Zeke	Bratkowski			
2	Zeke	Bratkowski	1963	1971	21	Irv	Comp				
3	Irv	Comp	1943	1949	28	Lynn	Dickey				
4	Lynn	Dickey	1976	1985	133	Brett	Favre				
5	Brett	Favre	1992	2007	442	Arnie	Herber				
6	Arnie	Herber	1930	1940	66	Cecil	Isbell				
7	Cecil	Isbell	1938	1942	61	Jack	Jacobs				
8	Jack	Jacobs	1947	1949	21	Don	Majkowski				
9	Don	Majkowski	1987	1992	56	Bob	Monnett				
10	Bob	Monnett	1933	1938	28	Babe	Parilli				
11	Babe	Parilli	1952	1958	31	Aaron	Rodgers				
12	Aaron	Rodgers	2005	2022	475	Tobin	Rote				
13	Tobin	Rote	1950	1956	89	Bart	Starr				
14	Bart	Starr	1956	1971	152	David	Whitehurst				
15	David	Whitehurst	1977	1983	28	Randy	Wright				
16	Randy	Wright	1984	1988	31						
17											

The Formula Builder pane shows the following configuration for the UNIQUE function:

- Function: UNIQUE
- Array: {"Zeke","Bratkowski";"Irv","Comp";"Ly..."} (with A2:B16 selected in the input field)
- By_col: logical
- Exactly_once: logical
- Result: "Zeke"

(Editor's note:
Down the road, you may bump into formulas named
=INDEX
=MATCH
and find out you guys share a very eccentric taste
like underwater basket weaving, and you'll make
friends with them.

That's great!)



ANALYZING CONTENTS



SUMMARY SHORTCUTS

	A	B	C	D	E	F	G	H	I	J
1	Rank	Title	Type	Genre	Basis	Worldwide BO	Domestic BO	Foreign BO		
2	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084	\$431,088,295	\$493,216,789		
3	2	The Sixth Sense	Live Action	Thriller	Original	\$672,806,292	\$293,506,292	\$379,300,000		
4	3	Toy Story 2	Animated	Family	Franchise	\$487,059,677	\$245,852,179	\$241,207,498		
5	4	The Matrix	Live Action	Action	Franchise	\$463,517,383	\$171,479,930	\$292,037,453		
6	5	Tarzan	Animated	Family	Adaptation	\$448,191,819	\$171,091,819	\$277,100,000		
7	6	American Beauty	Live Action	Drama	Original	\$356,296,601	\$130,096,601	\$226,200,000		
8	7	Runaway Bride	Live Action	Comedy	Original	\$309,460,292	\$152,257,509	\$157,202,783		
9	8	Stuart Little	Live Action	Family	Adaptation	\$300,135,367	\$140,035,367	\$160,100,000		
10	9	The Green Mile	Live Action	Drama	Adaptation	\$286,801,374	\$136,801,374	\$150,000,000		
11	10	The Blair Witch Project	Live Action	Thriller	Original	\$248,639,099	\$140,539,099	\$108,100,000		
12	11	American Pie	Live Action	Comedy	Original	\$235,483,004	\$102,561,004	\$132,922,000		
13	12	Big Daddy	Live Action	Comedy	Original	\$234,801,895	\$163,479,795	\$71,322,100		
14	13	Wild Wild West	Live Action	Comedy	Original	\$222,104,681	\$113,804,681	\$108,300,000		
15	14	Entrapment	Live Action	Drama	Original	\$212,404,396	\$87,704,396	\$124,700,000		
16	15	End of Days	Live Action	Action	Original	\$211,989,043	\$66,889,043	\$145,100,000		
17	16	Austin Powers: The Spy Who Shagged Me	Live Action	Comedy	Franchise	\$206,756,056	\$206,040,086	\$715,970		
18	17	Sleepy Hollow	Live Action	Drama	Adaptation	\$206,071,502	\$101,071,502	\$105,000,000		
19	18	Double Jeopardy	Live Action	Drama	Original	\$177,841,558	\$116,741,558	\$61,100,000		
20	19	The Haunting	Live Action	Thriller	Original	\$177,311,151	\$91,411,151	\$85,900,000		
21	20	Analyze This	Live Action	Comedy	Original	\$176,885,658	\$106,885,658	\$70,000,000		
22	21	Deep Blue Sea	Live Action	Action	Original	\$164,648,142	\$73,648,142	\$91,000,000		
23	22	Pokémon: The First Movie - Mewtwo Strikes Back	Animated	Family	Franchise	\$163,644,662	\$85,744,662	\$77,900,000		
24	23	Eyes Wide Shut	Live Action	Drama	Original	\$162,091,208	\$55,691,208	\$106,400,000		
25	24	Payback	Live Action	Drama	Original	\$161,626,121	\$81,526,121	\$80,100,000		
26	25	Princess Mononoke	Animated	Family	Original	\$159,414,369	\$2,375,308	\$157,039,061		
27	26	The Mummy	Live Action	Thriller	Original	\$155,563,437	\$155,385,488	\$177,949		
28	27	The Bone Collector	Live Action	Drama	Original	\$151,493,655	\$66,518,655	\$84,975,000		
29	28	The General's Daughter	Live Action	Drama	Original	\$149,705,852	\$102,705,852	\$47,000,000		
30	29	Inspector Gadget	Live Action	Family	Adaptation	\$134,403,112	\$97,403,112	\$37,000,000		
31	30	The Talented Mr. Ripley	Live Action	Drama	Adaptation	\$128,798,265	\$81,298,265	\$47,500,000		
32										
33										



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31	30	The Talented Mr. Ripley	Live Action	Drama	Adaptation	\$128,798,265	\$81,298,265	\$47,500,000		
32										
33										



Ready Accessibility: In Average: \$449,721,299 Count: 10 Sum: \$4,497,212,988

	A	B	C	D	E	F	G	H
1	Rank	Title	Type	Genre	Basis	Worldwide BO	Domestic BO	Foreign BO
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32								
33								

◀ ▶ Sheet1 Sheet2 Sheet3 1999 Worldwide BO +

Ready Accessibility: In

Average: \$449,721,299 Count: 10 \$ 2,988

- ✓ Cell Mode
- ✓ Flash Fill Blank Cells
- ✓ Flash Fill Changed Cells
- Sheet Number
- Workbook Statistics

- Sensitivity
- ✓ Signatures

- Caps Lock
- ✓ Fixed Decimal
- Overtyping Mode
- ✓ End Mode
- Macro Recording
- ✓ Accessibility Checker

- ✓ Selection Mode

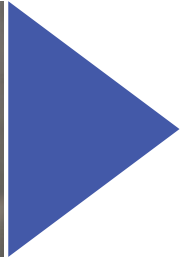
- ✓ Page Number

- ✓ Average
- ✓ Count
- Numerical Count
- Minimum
- Maximum
- ✓ Sum

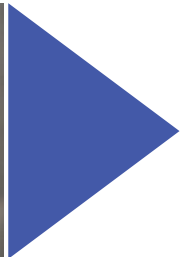
- ✓ Upload Status

- ✓ View Shortcuts
- ✓ Zoom Slider
- ✓ Zoom

ANALYZING CONTENTS



SUMMARY SHORTCUTS



MANUAL METHODS

“I just need an ad hoc table of the top franchise-based movies in 1999.”



	A	B	C	D	E	F	G	H
1	Rank	Title	Type	Genre	Basis	Worldwide	Domestic BO	Foreign BO
2	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084	\$431,088,295	\$493,216,789
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5	4	The Matrix	Live Action	Action	Franchise	\$463,517,383	\$181,000,000	\$282,517,383
17	16	Austin Powers: The Spy Who Shagged Me	Live Action	Comedy	Franchise	\$206,756,056	\$103,378,028	\$103,378,028
23	22	Pokémon: The First Movie - Mewtwo Strikes Back	Animated	Family	Franchise	\$163,644,662	\$85,744,662	\$77,900,000

1

FILTER DOWN

	A	B	C	D	E	F	G	H	I
1	Rank	Title	Type	Genre	Basis	Worldwide	Domestic BO	Foreign BO	
2	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084	\$431,088,295	\$493,216,789	
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23	22	Pokémon: The First Movie - Mewtwo Strikes Back	Animated	Family	Franchise	\$163,644,662	\$85,744,662	\$77,900,000	

2

HIGHLIGHT WHOLE ROWS

	A	B	C	D	E	F	G	H
1	Rank	Title	Type	Genre	Basis	Worldwide	Domestic BO	Foreign BO
2	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084	\$431,088,295	\$493,216,789
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23	22	Pokémon: The First Movie - Mewtwo Strikes Back	Animated	Family	Franchise	\$163,644,662	\$85,744,662	\$77,900,000

3

COPY

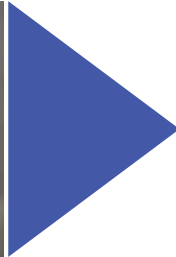
	A	B	C	D	E	F	G	H	I
1	Rank	Title	Type	Genre	Basis	Worldwide BO	Domestic BO	Foreign BO	
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4

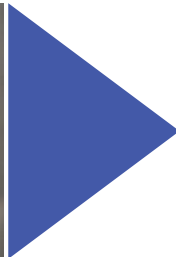
PASTE IN NEW SHEET



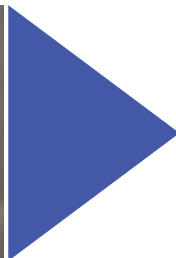
ANALYZING CONTENTS



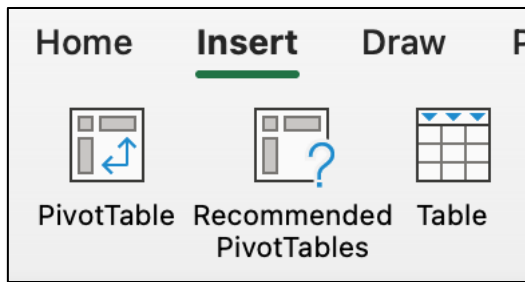
SUMMARY SHORTCUTS



MANUAL METHODS



PIVOTTABLE BASICS



Create PivotTable

Choose the data that you want to analyze.

Select a table or range

Table/Range: '1999 Worldwide BO'!\$A\$1:\$H\$31

Use an external data source

Choose Connection... No data fields have been retrieved.

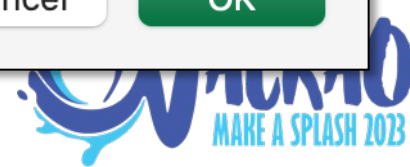
Choose where to place the PivotTable.

New worksheet

Existing worksheet

Table/Range:

Cancel OK




A B C D E F G

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PivotTable1

To build a report, choose fields from the PivotTable Field List



Rank
Title
Type
Genre

Filters Columns

Rows Values

Drag fields between areas

Sheet1 Sheet2 Sheet3 Sheet6 1999 +

The image shows a Microsoft Excel spreadsheet with a PivotTable task pane open. The task pane is titled "PivotTable Fields" and contains a search bar labeled "FIELD NAME" with the text "Search fields". Below the search bar are four fields: "Rank", "Title", "Type", and "Genre", each with an unchecked checkbox. The task pane is divided into four quadrants: "Filters", "Columns", "Rows", and "Values", each with an icon and a label. At the bottom of the task pane, it says "Drag fields between areas". The spreadsheet shows a PivotTable named "PivotTable1" in cell A3, with a green border around it. The spreadsheet has columns A through G and rows 1 through 33. The bottom of the spreadsheet shows the sheet tabs: "Sheet1", "Sheet2", "Sheet3", "Sheet6", and "1999 +".

Excel interface showing a PivotTable setup on Sheet6. The PivotTable is located in cells A3:A4. The PivotTable Field List is open on the right side of the screen.

PivotTable Fields

FIELD NAME

- Rank
- Title
- Type
- Genre

Filters **Columns**

A POSSIBLE BREAKOUT	A POSSIBLE BREAKOUT
---------------------------	---------------------------

Rows **Values**

A POSSIBLE BREAKOUT	WHAT YOU ARE ACTUALLY CALCULATING
---------------------------	--

Drag fields between areas

	A	B	C	D	E	F
1						
2						
3	Row Labels	Sum of Worldwide BO				
4	Animated	1258310527				
5	Live Action	6831940228				
6	Grand Total	8090250755				
7						
8						
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10						
11						
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14						
15						
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32						
33						

PivotTable Fields	
FIELD NAME	Search fields
<input type="checkbox"/> Genre	
<input type="checkbox"/> Basis	
<input checked="" type="checkbox"/> Worldwide BO	
<input type="checkbox"/> Domestic BO	
Filters	Columns
Rows	Values
Type	Sum of Worl...

“The top 25 movies in 1999 earned \$8 billion in worldwide box office.

Animated movies earned \$1.3 billion, while live action movies earned \$6.8 billion.”



“The top 25 movies in 1999 earned \$8 billion in worldwide box office.

Live action movies earned \$6.8 billion. \$1.6 billion of that \$6.8 billion came from new titles in existing franchises.”

Row Labels	Adaptation	Franchise	Original	Grand Total
Animated	448191819	650704339	159414369	1258310527
Live Action	1056209620	1594578523	4181152085	6831940228
Grand Total	1504401439	2245282862	4340566454	8090250755

PivotTable Fields

FIELD NAME Search fields

- Type
- Genre
- Basis
- Worldwide BO

Filters Columns

Rows Values

Drag fields between areas

Genre	Franchise	Original	Grand Total
Live Action	1387822467	376637185	1764459652
Grand Total	1387822467	376637185	1764459652

PivotTable Fields

FIELD NAME

- Title
- Type
- Genre
- Basis

Filters

- : Genre ?

Columns

- : Basis ?

Rows

- : Type ?

Values

- : Sum of Worl... ?

Drag fields between areas

“Action movies in the top 25 – all of which were live and not animated – earned \$1.8 billion in 1999. New titles in existing franchises accounted for \$1.4 billion of that \$1.8 billion.”





BUT DID YOU KNOW

You could have found the same answer through filtering and summary shortcuts?

	A	B	C	D	E	F	G	H	I
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32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									

Ready Average: \$693,911,234 Count: 2 Sum: \$1,387,822,467 100%



CREATING CONTENTS



MAKING YOUR OWN IDS: PARTIALS

LEFT AND RIGHT

A2 *fx* =LEFT(C2,6)

	A	B	C	D	E	F	G	H	I
1	ID	Rank	Title	Type	Genre	Basis	Worldwide BO	Domestic BO	Foreign BO
2	Star W	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084	\$431,088,295	\$493,216,789
3		2	The Sixth Sense	Live Action	Thriller	Original	\$672,806,292	\$293,506,292	\$379,300,000
4		3	Toy Story 2	Animated	Family	Franchise	\$487,059,677	\$245,852,179	\$241,207,498
5		4	The Matrix	Live Action	Action	Franchise	\$463,517,383	\$171,479,930	\$292,037,453

A2 *fx* =RIGHT(C2,6)

	A	B	C	D	E	F	G	H	I
1	ID	Rank	Title	Type	Genre	Basis	Worldwide BO	Domestic BO	Foreign BO
2	Menace	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084	\$431,088,295	\$493,216,789
3		2	The Sixth Sense	Live Action	Thriller	Original	\$672,806,292	\$293,506,292	\$379,300,000
4		3	Toy Story 2	Animated	Family	Franchise	\$487,059,677	\$245,852,179	\$241,207,498
5		4	The Matrix	Live Action	Action	Franchise	\$463,517,383	\$171,479,930	\$292,037,453

CREATING CONTENTS



MAKING YOUR OWN IDS: PARTIALS



MAKING YOUR OWN IDS: COMBINATIONS

TEXTJOIN

A2 *fx* =TEXTJOIN(,,B2,C2,E2)

	A	B	C	D	E	F	G
1	ID	First Name	Last Name	First Year	Final Year	Touchdown Passes	
2	ZekeBratkowski1971	Zeke	Bratkowski	1963	1971	21	
3		Irv	Comp	1943	1949	28	
4		Lynn	Dickey	1976	1985	133	
5		Brett	Favre	1992	2007	442	
6		Arnie	Herber	1930	1940	66	
7		Cecil	Isbell	1938	1942	61	
8		Jack	Jacobs	1947	1949	21	
9		Don	Majkowski	1987	1992	56	
10		Bob	Monnett	1933	1938	28	
11		Babe	Parilli	1952	1958	31	
12		Aaron	Rodgers	2005	2022	475	
13		Tobin	Rote	1950	1956	89	
14		Bart	Starr	1956	1971	152	
15		David	Whitehurst	1977	1983	28	
16		Randy	Wright	1984	1988	31	
17							

Formula Builder

Show All Functions

TEXTJOIN

Delimiter = text

Ignore_empty = logical

Text1 = "Zeke"

B2

Text2 = "Bratkowski"

C2

Text3 = "1971"

E2

Result: "ZekeBratkowski1971"

Done

FORMULA CONCATENATION

A2 =CONCATENATE(B2,D2,C2)

	A	B	C	D	E	F	G
1	ID	First Name	Last Name	First Year	Final Year	Touchdown Passes	
2	Zeke1963Bratkowski	Zeke	Bratkowski	1963	1971	21	
3		Irv	Comp	1943	1949	28	
4		Lynn	Dickey	1976	1985	133	
5		Brett	Favre	1992	2007	442	
6		Arnie	Herber	1930	1940	66	
7		Cecil	Isbell	1938	1942	61	
8		Jack	Jacobs	1947	1949	21	
9		Don	Majkowski	1987	1992	56	
10		Bob	Monnett	1933	1938	28	
11		Babe	Parilli	1952	1958	31	
12		Aaron	Rodgers	2005	2022	475	
13		Tobin	Pete	1950	1956	80	

Formula Builder

Show All Functions

CONCATENATE

Text1 = "Zeke"
B2

Text2 = "1963"
D2

Text3 = "Bratkowski"
C2

+

MANUAL CONCATENATION

	A	B	C	D	E	F
1	ID	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Bratkowski1971	Zeke	Bratkowski	1963	1971	21
3		Irv	Comp	1943	1949	28
4		Lynn	Dickey	1976	1985	133
5		Brett	Favre	1992	2007	442
6		Arnie	Herber	1930	1940	66
7		Cecil	Isbell	1938	1942	61
8		Jack	Jacobs	1947	1949	21

WHY WE LIKE MANUAL CONCATENATION

A2 *fx* | =D2&E2&F2

	A	B	C	D	E	F	G
1	ID	Rank	Title	Type	Genre	Basis	Worldwide BO
2	Live ActionActionFranchise	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084
3		2	The Sixth Sense	Live Action	Thriller	Original	\$672,806,292
4		3	Toy Story 2	Animated	Family	Franchise	\$487,059,677
5		4	The Matrix	Live Action	Action	Franchise	\$463,517,383
6		5	Tarzan	Animated	Family	Adaptation	\$448,191,819
7		6	American Beauty	Live Action	Drama	Original	\$356,296,601



WHY WE LOVE MANUAL CONCATENATION

A2 *fx* | =D2&"-"&E2&"-"&F2

	A	B	C	D	E	F	G
1	ID	Rank	Title	Type	Genre	Basis	Worldwide BO
2	Live Action-Action-Franchise	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084
3		2	The Sixth Sense	Live Action	Thriller	Original	\$672,806,292
4		3	Toy Story 2	Animated	Family	Franchise	\$487,059,677
5		4	The Matrix	Live Action	Action	Franchise	\$463,517,383
6		5	Tarzan	Animated	Family	Adaptation	\$448,191,819
7		6	American Beauty	Live Action	Drama	Original	\$356,296,601



WHY WE LOVE MANUAL CONCATENATION

A2 *fx* =D2&"-"&E2&"-"&F2

	A	B	C	D	E	F	G
1	ID	Rank	Title	Type	Genre	Basis	Worldwide BO
2	Live Action-Action-Franchise	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084
3		2	The Sixth Sense	Live Action	Thriller	Original	\$672,806,292
4		3	Toy Story 2	Animated	Family	Franchise	\$487,059,677
5		4	The Matrix	Live Action	Action	Franchise	\$463,517,383
6		5	Tarzan	Animated	Family	Adaptation	\$448,191,819
7		6	American Beauty	Live Action	Drama	Original	\$356,296,601

Do you guys know what this is?



*If you double-click that handle,
It takes the formula all the way down the wall next to it!*

	A	B	C	D	E	F	G
1	ID	Rank	Title	Type	Genre	Basis	Worldwide BO
2	Live Action-Action-Franchise	1	Star Wars: Episode I - The Phantom Menace	Live Action	Action	Franchise	\$924,305,084
3	Live Action-Thriller-Original	2	The Sixth Sense	Live Action	Thriller	Original	\$672,806,292
4	Animated-Family-Franchise	3	Toy Story 2	Animated	Family	Franchise	\$487,059,677
5	Live Action-Action-Franchise	4	The Matrix	Live Action	Action	Franchise	\$463,517,383
6	Animated-Family-Adaptation	5	Tarzan	Animated	Family	Adaptation	\$448,191,819
7	Live Action-Drama-Original	6	American Beauty	Live Action	Drama	Original	\$356,296,601
8	Live Action-Comedy-Original	7	Runaway Bride	Live Action	Comedy	Original	\$309,460,292
9	Live Action-Family-Adaptation	8	Stuart Little	Live Action	Family	Adaptation	\$300,135,367
10	Live Action-Drama-Adaptation	9	The Green Mile	Live Action	Drama	Adaptation	\$286,801,374
11	Live Action-Thriller-Original	10	The Blair Witch Project	Live Action	Thriller	Original	\$248,639,099
12	Live Action-Comedy-Original	11	American Pie	Live Action	Comedy	Original	\$235,483,004
13	Live Action-Comedy-Original	12	Big Daddy	Live Action	Comedy	Original	\$234,801,895
14	Live Action-Comedy-Original	13	Wild Wild West	Live Action	Comedy	Original	\$222,104,681
15	Live Action-Drama-Original	14	Entrapment	Live Action	Drama	Original	\$212,404,396
16	Live Action-Action-Original	15	End of Days	Live Action	Action	Original	\$211,989,043
17	Live Action-Comedy-Franchise	16	Austin Powers: The Spy Who Shagged Me	Live Action	Comedy	Franchise	\$206,756,056
18	Live Action-Drama-Adaptation	17	Sleepy Hollow	Live Action	Drama	Adaptation	\$206,071,502
19	Live Action-Drama-Original	18	Double Jeopardy	Live Action	Drama	Original	\$177,841,558
20	Live Action-Thriller-Original	19	The Haunting	Live Action	Thriller	Original	\$177,311,151
21	Live Action-Comedy-Original	20	Analyze This	Live Action	Comedy	Original	\$176,885,658
22	Live Action-Action-Original	21	Deep Blue Sea	Live Action	Action	Original	\$164,648,142

CREATING CONTENTS



MAKING YOUR OWN IDS: PARTIALS



MAKING YOUR OWN IDS: COMBINATIONS



MAKING YOUR OWN IDS: WORDY BITS



MAKING DATA FROM DATA

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475
3	Brett Favre			1992	2007	442
4	Bart Starr			1956	1971	152
5	Lynn Dickey			1976	1985	133
6	Tobin Rote			1950	1956	89
7	Arnie Herber			1930	1940	66
8	Cecil Isbell			1938	1942	61
9	Don Majkowski			1987	1992	56
10	Babe Parilli			1952	1958	31
11	Randy Wright			1984	1988	31
12	Irv Comp			1943	1949	28
13	Bob Monnett			1933	1938	28
14	David Whitehurst			1977	1983	28
15	Zeke Bratkowski			1963	1971	21
16	Jack Jacobs			1947	1949	21

MAKING DATA FROM DATA

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475



MAKING DATA FROM DATA

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

“The first name is easy enough. It’s on the left. So:
=LEFT(A2,[however many spaces I need... *oh.*])



MAKING DATA FROM DATA

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

“The first name is easy enough. It’s on the left. So:

=LEFT(A2,[however many spaces I need... *oh.*])

“The last name is even harder than that. I need:

=RIGHT(A2,[however long from the right until the gap])



MAKING DATA FROM DATA

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

You need to know how far along that empty space is, and then use it to guide other functions.

Enter =MID... and **return of =FIND.**

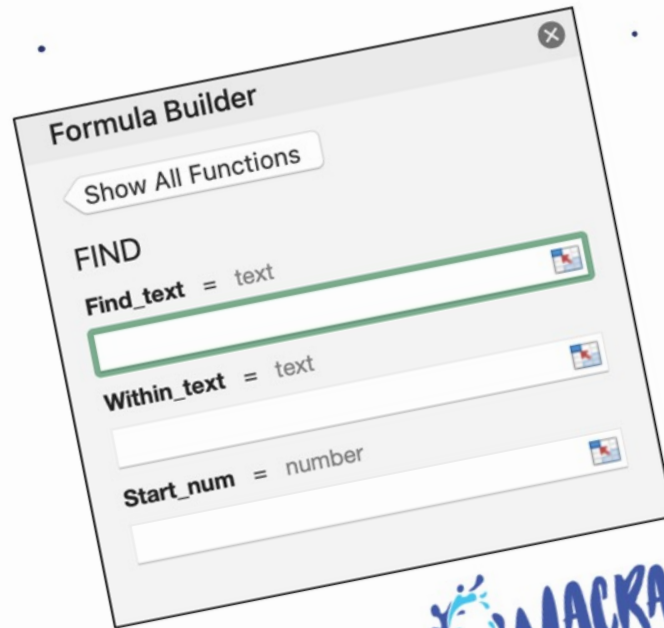


MAKING

You

Yes, there is a =FIND function.

It's **TERRIFYING.**



d



MAKING



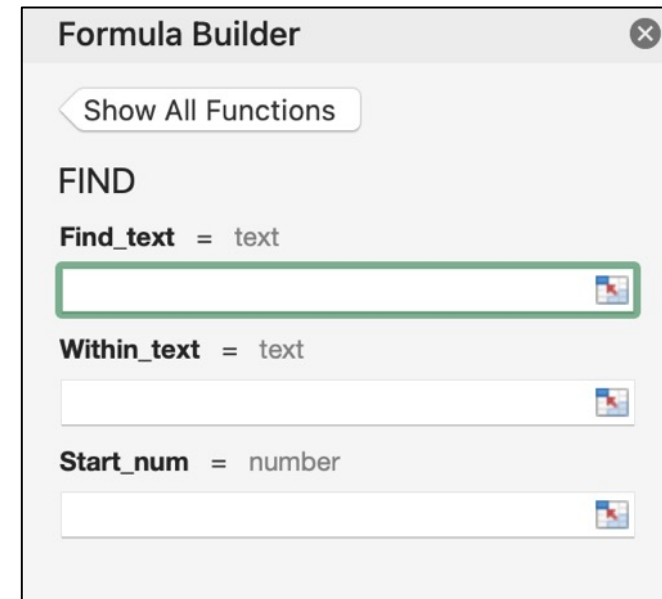
FIND

=FIND searches for a patch of text in a cell and tells you when it first encounters it.

“Tell me where to find this thingy...”

“...in this cell...”

“...starting from here.”



FIND

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

=FIND("a",A2,1) 1

=FIND("o",A2,1) 4

=FIND("d",A2,1) 9

=FIND(" ",A2,1) 6



FIND

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

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

=LEFT(A2,6)

=Aaron_



FIND

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

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

=LEFT(A2,6)

=Aaron_

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

=LEFT(A2,5)

=Aaron



FIND

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

=RIGHT(A2,FIND(" ",A2,1))

=RIGHT(A2,6)



FIND

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

=RIGHT(A2,FIND(" ",A2,1))

=RIGHT(A2,6)

=odgers

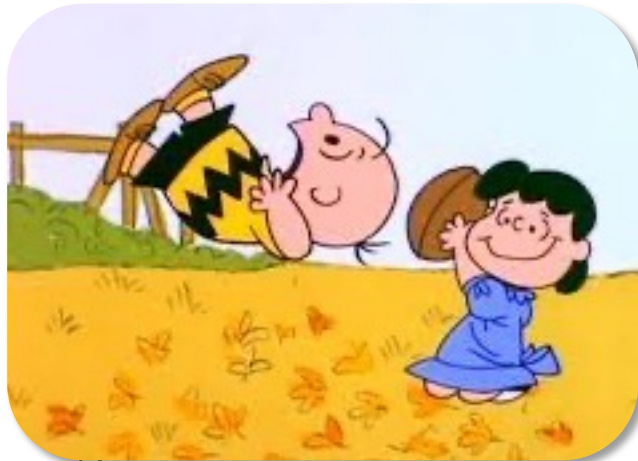
=_Favre

=Starr

=ickey

=n Rote

=wski



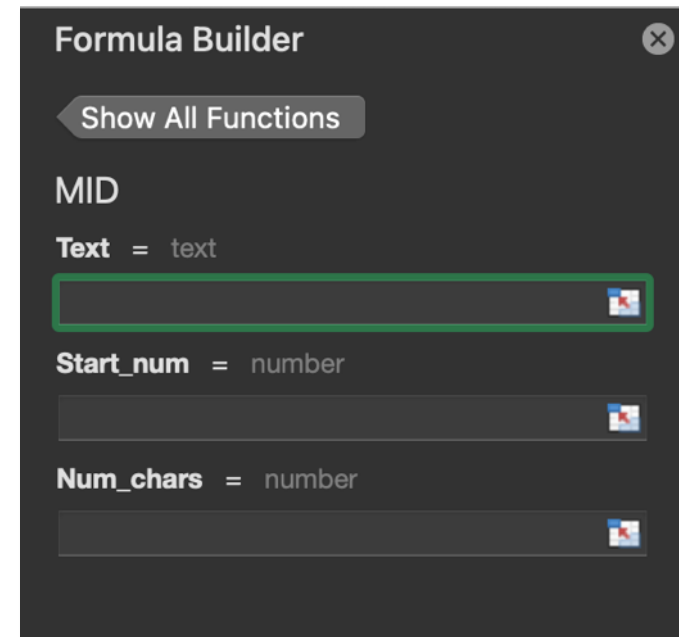
MID

=MID searches for a patch of text in a cell and tells you what follows it.

“In this cell...”

“...start at this position...”

“...and give me the following X characters, including that one.”



MID

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

=MID(A2,1,1) A

=MID(A2,3,2) ro

=MID(A2,7,7) Rodgers

=MID(A2,7,10000000) Rodgers



MID

IF WE CAN JUST TELL EXCEL WHERE THE SPACE IS,
WE CAN SAY “GIVE ME EVERYTHING AFTER THAT”
AND SIMULATE A USEFUL =RIGHT EQUATION!

	Name	First Name	Last Name	Start Year	Final Year	Count	Wt. Total
2	Aaron Rodgers	Aaron	Rodgers	2005	2022		475

=MID(A2,1,1) **A**

=MID(A2,3,2) **ro**

=MID(A2,7,7) **Rodgers**

=MID(A2,7,10000000) Rodgers



FIND + MID

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

=MID(A2,FIND(" ",A2,1),1000)

=MID(A2,6,1000)

=_Rodgers



FIND + MID

	A	B	C	D	E	F
1	Name	First Name	Last Name	First Year	Final Year	Touchdown Passes
2	Aaron Rodgers			2005	2022	475

=MID(A2,FIND(" ",A2,1),1000)

=MID(A2,6,1000)

=_Rodgers

=MID(A2,FIND(" ",A2,1)+1,1000)

=MID(A2,7,1000)

=Rodgers





ADVANCED

IN WHICH WE TAP INTO
ADVANCED LEVELS OF SORCERY

The most advanced thing we'll do is **APPEND**
INCORPORATE data.
IMPORT



Holiday	Month	Day
Easter	April	9
Christmas	December	25
MLK Day	January	16
Thanksgiving	November	23
Valentine's Day	February	14
Independence Day	July	4
Labor Day	September	4
Memorial Day	May	29
Halloween	October	31

“My main table is right here...”

...but I need some data from over there.”

Holiday	Favorite Part
Easter	Candy
Christmas	Presents
MLK Day	Stories
Thanksgiving	Turkey
Valentine's Day	Kisses
Independence Day	Flags
Labor Day	Vacation
Memorial Day	Vacation
Halloween	Candy

Holiday	Month	Day
Easter	April	9
Christmas	December	25
MLK Day	January	16
Thanksgiving	November	23
Valentine's Day	February	14
Independence Day	July	4
Labor Day	September	4
Memorial Day	May	29
Halloween	October	31



Holiday	Favorite Part
Easter	Candy
Christmas	Presents
MLK Day	Stories
Thanksgiving	Turkey
Valentine's Day	Kisses
Independence Day	Flags
Labor Day	Vacation
Memorial Day	Vacation
Halloween	Candy

THE “BEFORE TODAY” EXCEL USER:

I’ll just copy that column over.

Holiday	Month	Day
Easter	April	9
Christmas	December	25
MLK Day	January	16
Thanksgiving	November	23
Valentine's Day	February	14
Independence Day	July	4
Labor Day	September	4
Memorial Day	May	29
Halloween	October	31

Holiday	Favorite Part
Easter	Candy
Christmas	Presents
MLK Day	Stories
Thanksgiving	Turkey
Valentine's Day	Kisses
Independence Day	Flags
Labor Day	Vacation
Memorial Day	Vacation
Halloween	Candy



THE “BEFORE TODAY” EXCEL USER:

I’ll just copy that column over.

Holiday	Month	Day
Easter	April	9
Christmas	December	25
MLK Day	January	16
Thanksgiving	November	23
Valentine's Day	February	14
Independence Day	July	4
Labor Day	September	4
Memorial Day	May	29
Halloween	October	31

Holiday	Favorite Part
Easter	Candy
Christmas	Presents
MLK Day	Stories
Thanksgiving	Turkey
Valentine's Day	Kisses
Independence Day	Flags
Labor Day	Vacation
Memorial Day	Vacation
Halloween	Candy
Arbor Day	Planting
President's Day	Vacation
New Year's Day	Parade
St. Patrick's Day	Shamrocks
Vernal Equinox	Reflection
Winter Solstice	Snow
Diwali	Candles
Hanukkah	Games

THE “BEFORE TODAY” EXCEL USER:

I’ll just copy that column over.

Holiday	Month	Day
Easter	April	9
Christmas	December	25
MLK Day	January	16
Thanksgiving	November	23
Valentine's Day	February	14
Independence Day	July	4
Labor Day	September	4
Memorial Day	May	29
Halloween	October	31

Holiday	Favorite Part
Arbor Day	Planting
Christmas	Presents
Diwali	Candles
Easter	Candy
Halloween	Candy
Hanukkah	Games
Independence Day	Flags
Labor Day	Vacation
Memorial Day	Vacation
MLK Day	Stories
New Year's Day	Parade
President's Day	Vacation
St. Patrick's Day	Shamrocks
Thanksgiving	Turkey
Valentine's Day	Kisses
Vernal Equinox	Reflection
Winter Solstice	Snow

THE “TODAY” EXCEL USER:

I'll figure out how Excel can help me do this.

Holiday	Month	Day
Easter	April	9
Christmas	December	25
MLK Day	January	16
Thanksgiving	November	23
Valentine's Day	February	14
Independence Day	July	4
Labor Day	September	4
Memorial Day	May	29
Halloween	October	31

Holiday	Favorite Part
Arbor Day	Planting
Christmas	Presents
Diwali	Candles
Easter	Candy
Halloween	Candy
Hanukkah	Games
Independence Day	Flags
Labor Day	Vacation
Memorial Day	Vacation
MLK Day	Stories
New Year's Day	Parade
President's Day	Vacation
St. Patrick's Day	Shamrocks
Thanksgiving	Turkey
Valentine's Day	Kisses
Vernal Equinox	Reflection
Winter Solstice	Snow

THE ANSWER USED TO BE =VLOOKUP

	A	B	C	D
1	Holiday	Month	Day	Favorite Part
2	Easter	April	9	Candy
3	Christmas	December	25	
4	MLK Day	January	16	
5	Thanksgiving	November	23	
6	Valentine's Day	February	14	
7	Independence Day	July	4	
8	Labor Day	September	4	
9	Memorial Day	May	29	
10	Halloween	October	31	

=VLOOKUP(A2,F:G,2,0)

F	G
Holiday	Favorite Part
Arbor Day	Planting
Christmas	Presents
Diwali	Candles
Easter	Candy
Halloween	Candy
Hanukkah	Games
Independence Day	Flags
Labor Day	Vacation
Memorial Day	Vacation
MLK Day	Stories
New Year's Day	Parade
President's Day	Vacation
St. Patrick's Day	Shamrocks
Thanksgiving	Turkey
Valentine's Day	Kisses
Vernal Equinox	Reflection
Winter Solstice	Snow

THE ANSWER USED TO BE =VLOOKUP

MID *fx* | =VLOOKUP(A2,F:G,2,0)|

	A	B	C	D	E	F	G	H
1	Holiday	Month	Day	Favorite Part		Holiday	Favorite Part	
2	Easter	April	9	=VLOOKUP(A2,F:G,2,0)		Arbor Day	Planting	
3	Christmas	December	25			Christmas	Presents	
4	MLK Day	January	16			Diwali	Candles	
5	Thanksgiving	November	23			Easter	Candy	
6	Valentine's Day	February	14			Halloween	Candy	
7	Independence Day	July	4			Hanukkah	Games	
8	Labor Day	September	4			Independence Day	Flags	
9	Memorial Day	May	29			Labor Day	Vacation	
10	Halloween	October	31			Memorial Day	Vacation	
11						MLK Day	Stories	
12						New Year's Day	Parade	
13						President's Day	Vacation	
14						St. Patrick's Day	Shamrocks	
15						Thanksgiving	Turkey	
16						Valentine's Day	Kisses	
17						Vernal Equinox	Reflection	
18						Winter Solstice	Snow	
19								

Formula Builder

Show All Functions

VLOOKUP

Lookup_value = "Easter"

A2

Table_array = {...}

F:G

Col_index_num = 2

2

Range_lookup = FALSE

0

Result: "Candy" Done

fx VLOOKUP

THE ANSWER USED TO BE =VLOOKUP

MID fx | =VLOOKUP(A2,F:G,2,0)|

	A	B	C	D	E	F	G	H
1	Holiday	Month	Day	Favorite Part		Holiday	Favorite Part	
2	Easter	April	9	=VLOOKUP(A2,F:G,2,0)		Arbor Day	Planting	
3	Christmas	December	25			Christmas	Presents	
4	MLK Day	January	16			Diwali	Candles	
5	Thanksgiving	November	23			Easter	Candy	
6	Valentine's Day	February	14			Halloween	Candy	
7	Independence Day	July	4			Hanukkah	Games	
8	Labor Day	September	4			Labor Day	vacation	
9	Memorial Day	May	29					
10	Halloween	October	31					
11								
12						New Year's Day	Parade	
13						President's Day		
14						St. Patrick's Day	Shamrocks	
15						Thanksgiving	Turkey	
16						Valentine's Day	Kisses	
17						Vernal Equinox	Reflection	
18						Winter Solstice	Snow	
19								

Formula Builder

Show All Functions

VLOOKUP

Lookup_value = "Easter"

A2 Look for THIS thing

Table_array = {...}

Col_index_num = 2

Range_lookup = FALSE

Look for exactly that thing, not something "close"

Result: "Candy" Done

fx VLOOKUP

Over HERE, which starts with the column where you can find the thing

When you find it, tell me what's in the Nth column of that table I just drew

THE ANSWER USED TO BE =VLOOKUP

MID fx | =VLOOKUP(A2,F:G,2,0)|

	A	B	C	D	E	F	G
1	Holiday	Month	Day	Favorite Part		Holiday	Favorite Part
2	Easter	April	9	=VLOOKUP(A2,F:G,2,0)		Arbor Day	Planting
3	Christmas	December	25			Christmas	Presents
4	MLK Day	January	16			Diwali	Candles
5	Thanksgiving	November	23			Easter	Candy
6	Valentine's Day	February	14			Halloween	Candy
7	Independence Day	July	4			Hanukkah	Games
8	Labor Day	September	4			Independence Day	
9	Memorial Day	May	29			Labor Day	vacation
10	Halloween	October	31			Memorial Day	Vacation
11						MLK Day	Stories
12						New Year's Day	Parade
13						President's Day	
14						St. Patrick's Day	Shamrocks
15						Thanksgiving	Turkey
16						Valentine's Day	Kisses
17						Vernal Equinox	Reflection
18						Winter Solstice	Snow
19							

Formula Builder

Show All Functions

VLOOKUP

Lookup_value = "Easter"
A2 Look for "Easter"

Table_array = {...}

Col_index_num = 2

Range_lookup = FALSE

Result: "Candy" Done

fx VLOOKUP

In E:F, and you should be able to spot "Easter" in E

Tell me what's in the 2nd column of E:F

Look for exactly "Easter", not "Leaster" or "Easty" or

THE ANSWER USED TO BE =VLOOKUP

MID =VLOOKUP(A7,F:G,2,0)

	A		F	G	H	
1	Holiday	Month	Day	Favorite Part	Holiday	Favorite Part
2	Easter	April	9	Candy	Arbor Day	Planting
3	Christmas	December	25	Presents	Christmas	Presents
4	MLK Day	January	16	Stories	Diwali	Candles
5	Thanksgiving	November	23	Turkey	Easter	Candy
6	Valentine's Day	February	14	Kisses	Halloween	Candy
7	Independence Day	July	4	A7,F:G,2,0	Hanukkah	Games
8	Labor Day	September	4	Vacation	Independence Day	Flags
9	Memorial Day	May	29	Vacation	Labor Day	Vacation
10	Halloween	October	31	Candy	Memorial Day	Vacation
11					MLK Day	Stories
12					New Year's Day	Parade
13					President's Day	Vacation
14					St. Patrick's Day	Shamrocks
15					Thanksgiving	Turkey
16					Valentine's Day	Kisses
17					Vernal Equinox	Reflection
18					Winter Solstice	Snow
19						

Formula Builder

Show All Functions

VLOOKUP

Lookup_value = "Independence Day"

A7

Table_array = {...}

F:G

Col_index_num = 2

2

Range_lookup = FALSE

0

Result: "Flags"

Done

VLOOKUP

THE ANSWER USED TO BE =VLOOKUP

WHY COLUMNS AND NOT CELLS?

If you copy a formula downward, the columns will stay the same – but if we had selected cells, that would have shifted with our formula.

This also spares you a lesson about F4 and dollar signs <phew>.

	A	B	C	D	E	F	G
1	Holiday	Month	Day	Candy	Arbor Day	Planting	
2	Easter	April	9	Candy	Arbor Day	Planting	
3	Christmas	December	25	Present	Christmas	Presents	
4	MLK Day	January	16	Cookies	MLK Day	Candy	
5	Thanksgiving	November	23	Turkey	Easter	Candy	
6	Vernal Equinox	March	14	Kisses	Vernal Equinox	Candy	
7	Independence Day	July	4	A7,F:G,2,0)	Hanukkah	Games	
8	Labor Day	September	4	Vacation	Independence Day	Flags	
9	Memorial Day	May	29	Vacation	Labor Day	Vacation	
10	Halloween	October	31	Candy	Memorial Day	Vacation	
11	MLK Day	January	16	Cookies	MLK Day	Candy	
12	New Year's Day	January	1	Reflection	New Year's Day	Reflection	
13	President's Day	February	15	Reflection	President's Day	Reflection	
14	St. Patrick's Day	March	17	Shamrocks	St. Patrick's Day	Shamrocks	
15	Thanksgiving	November	23	Turkey	Thanksgiving	Turkey	
16	Valentine's Day	February	14	Kisses	Valentine's Day	Kisses	
17	Vernal Equinox	March	14	Reflection	Vernal Equinox	Reflection	
18	Winter Solstice	December	21	Snow	Winter Solstice	Snow	
19	Spring Equinox	March	20	Reflection	Spring Equinox	Reflection	

THE ANSWER USED TO BE =VLOOKUP

IN 2021, THE ANSWER BECAME =XLOOKUP



ANNOYING THINGS ABOUT =VLOOKUP

- You have to carefully define a “second table” that necessarily starts with the place to look for your matching ID.
- You have to count out the steps to take before it returns a value to you.
- You have to instruct it to make an exact match rather than a fuzzy match.



MID fx =XLOOKUP(A2,F:F,G:G)

XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])

	Holiday	Month	Day	Favorite Part	Holiday	Favorite Part
1						
2	Easter	April	9	F:F,G:G)	Arbor Day	Planting
3	Christmas	December	25	Presents	Christmas	Presents
4	MLK Day	January	16	Stories	Diwali	Candles
5	Thanksgiving	November	23	Turkey	Easter	Candy
6	Valentine's Day	February	14	Kisses	Halloween	Candy
7	Independence Day	July	4	Flags	Hanukkah	Games
8	Labor Day	September	4	Vacation	Independence Day	Flags
9	Memorial Day	May	29	Vacation	Labor Day	Vacation
10	Halloween	October	31	Candy	Memorial Day	Vacation
11					MLK Day	Stories
12					New Year's Day	Parade
13					President's Day	Vacation
14					St. Patrick's Day	Shamrocks
15					Thanksgiving	Turkey
16					Valentine's Day	Kisses
17					Vernal Equinox	Reflection
18					Winter Solstice	Snow
19						

Formula Builder

Show All Functions

XLOOKUP

Lookup_value = "Easter"

A2

Lookup_array = {"Holiday";"Arbor Day";"Chris..."

F:F

Return_array = {"Favorite Part";"Planting";"Pre..."

G:G

If_not_found = any

Match_mode = number

Result: "Candy"

Done

fx XLOOKUP



MID fx =XLOOKUP(A2,F:F,G:G)

XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])

	Holiday	Month	Day	Favorite Part	Holiday	Favorite Part
1						
2	Easter	April	9	F:F,G:G)	Arbor Day	Planting
3	Christmas	December	25	Presents	Christmas	Presents
4	MLK Day	January	16	Stories	Diwali	Candles
5	Thanksgiving	November	23	Turkey	Easter	Candy
6	Valentine's Day	February	14	Kisses	Halloween	Candy
7	Independence Day	July	4	Flags	Hanukkah	Games
8	Labor Day	September	4	Vacation	Independence Day	Flags
9	Memorial Day	May	29	Vacation	Labor Day	Vacation
10	Halloween	October	31	Candy	Memorial Day	Va
11					MLK Day	St
12					New Year's Day	Parade
13					President's Day	Vacation
14					St. Patrick's Day	Shamrocks
15					Thanksgiving	Turkey
16					Valentine's Day	Kisses
17					Vernal Equinox	Reflection
18					Winter Solstice	Snow
19						

Formula Builder

Show All Functions

XLOOKUP

Lookup_value = "Easter"
A2 Look for "Easter"
Lookup_array = {"Holiday";"Arbor Day";"Chris..."
F:F In E:E
Return_array = {"Favorite Part";"Planting";"Pre..."

Whatever row that is, give me what's in F:F

If_not_found = any
Match_mode = number
Result: "Candy" Done

fx XLOOKUP



MID fx =XLOOKUP(A2,F:F,G:G)

XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])

	Holiday	Month	Day	Favorite Part	Holiday	Favorite Part
1	Easter	April	9	F:F,G:G)	Arbor Day	Planting
2	Christmas	December	25	Presents	Christmas	Presents
3	MLK Day	January	16	Stories	Diwali	Candles
4	Thanksgiving	November	23	Turkey	Easter	Candy
5	Valentine's Day	February	14	Kisses	Halloween	Candy
6	Independence Day	July	4	Flags	Hanukkah	Games
7	Labor Day	September	4	Vacation	Independence Day	Flags
8	Memorial Day	May	29	Vacation	Labor Day	Vacation
9	Halloween	October	31	Candy	Memorial Day	Va
10					MLK Day	Stc
11					New Year's Day	Parade
12						
13						
14					St. Patrick's Day	Shamrocks
15						
16						
17					Vernal Equinox	Reflection
18					Winter Solstice	Snow
19						

Formula Builder

Show All Functions

XLOOKUP

Lookup_value = "Easter"
 Look for "Easter"

Lookup_array = {"Holiday";"Arbor Day";"Chris..."
 In E:E

Return_array = {"Favorite Part";"Planting";"Pre..."
 Whatever row that is, give me what's in F:F

If not found = any

Match mode = number

Result: "Candy"

fx XLOOKUP

[Let's default to saying #N/A if there's no match, but we can put something else in if you'd like]

[Let's default to an exact match, but if you want options, sure, we can do options]



D11 fx =XLOOKUP(A11,F:F,G:G,"NEED DATA")

	A	B	C	D	E	F	G
1	Holiday	Month	Day	Favorite Part	Holiday	Favorite Part	
2	Easter	April	9	Candy	Arbor Day	Planting	
3	Christmas	December	25	Presents	Christmas	Presents	
4	MLK Day	January	16	Stories	Diwali	Candles	
5	Thanksgiving	November	23	Turkey	Easter	Candy	
6	Valentine's Day	February	14	Kisses	Halloween	Candy	
7	Independence Day	July	4	Flags	Hanukkah	Games	
8	Labor Day	September	4	Vacation	Independence Day	Flags	
9	Memorial Day	May	29	Vacation	Labor Day	Vacation	
10	Halloween	October	31	Candy	Memorial Day	Vacation	
11	Int'l Coffee Day	October	1	NEED DATA	MLK Day	Stories	
12					New Year's Day	Parade	
13					President's Day	Vacation	
14					St. Patrick's Day	Shamrocks	
15					Thanksgiving	Turkey	
16					Valentine's Day	Kisses	
17					Vernal Equinox	Reflection	
18					Winter Solstice	Snow	
19							

Formula Builder

Show All Functions

XLOOKUP

Lookup_value = "Int'l Coffee Day"
A11

Lookup_array = {"Holiday";"Arbor Day";"Chris..."
F:F

Return_array = {"Favorite Part";"Planting";"Pre..."
G:G

If_not_found = "NEED DATA"
"NEED DATA"

Match_mode = number

Result: "NEED DATA" Done

fx XLOOKUP



ANNOYING THINGS ABOUT =VLOOKUP

- You have to carefully define a “second table” that necessarily starts with the place to look for your matching ID.
- You have to count out the steps to take before it returns a value to you.
- You have to instruct it to make an exact match rather than a fuzzy match.



XLOOKUP Improvements

~~ANNOYING THINGS ABOUT =VLOOKUP~~

- ~~• You have to carefully define a “second table” that necessarily starts with the place to look for your matching ID.~~

I'll just look next to me!

- ~~• You have to count out the steps to take before it returns a value to you.~~

Point me where to go!

- ~~• You have to instruct it to make an exact match rather than a fuzzy match.~~

Let's make a safe assumption!





D2 fx =XLOOKUP(A2,G:G,H:H,"NEED DATA")

	A	B	C	D	E	F	G	H	I	J	K
1	Holiday	Month	Day	Favorite Part	What to Wear		Holiday	Favorite Part		Holiday	What to Wear
2	Easter	April	9	Candy	Dress		Arbor Day	Planting		Arbor Day	Casual
3	Christmas	December	25				Christmas	Presents		Christmas	Dress
4	MLK Day	January	16				Diwali	Candles		Diwali	Dress
5	Thanksgiving	November	23				Easter	Candy		Easter	Dress
6	Valentine's Day	February	14				Halloween	Candy		Halloween	Casual
7	Independence Day	July	4				Hanukkah	Games		Hanukkah	Dress
8	Labor Day	September	4				Independence Day	Flags		Independence Day	Casual
9	Memorial Day	May	29				Labor Day	Vacation		Labor Day	Casual
10	Halloween	October	31				Memorial Day	Vacation		Memorial Day	Casual
11	Int'l Coffee Day	October	1				MLK Day	Stories		MLK Day	Casual
12							New Year's Day	Parade		New Year's Day	Dress
13							President's Day	Vacation		President's Day	Casual
14							St. Patrick's Day	Shamrocks		St. Patrick's Day	Casual
15							Thanksgiving	Turkey		Thanksgiving	Dress
16							Valentine's Day	Kisses		Valentine's Day	Dress
17							Vernal Equinox	Reflection		Vernal Equinox	Casual
18							Winter Solstice	Snow		Winter Solstice	Dress
19											

D2 fx =XLOOKUP(A2,G:G,H:H,"NEED DATA")

STUDENT ID		COURSE DATA		D	E	STUDENT ID		BIRTHDATE	STUDENT ID		STATUS
				Favorite Part	What to Wear						
2	Easter	April	9	Candy	Dress	Arbor Day	Planting	Arbor Day	Casual		
3	Christmas	December	25			Christmas	Presents	Christmas	Dress		
4	MLK Day	January	16			Diwali	Candles	Diwali	Dress		
5	Thanksgiving	November	23			Easter	Candy	Easter	Dress		
6	Valentine's Day	February	14			Halloween	Candy	Halloween	Casual		
7	Independence Day	July	4			Hanukkah	Games	Hanukkah	Dress		
8	Labor Day	September	4			Independence Day	Flags	Independence Day	Casual		
9	Memorial Day	May	29			Labor Day	Vacation	Labor Day	Casual		
10	Halloween	October	31			Memorial Day	Vacation	Memorial Day	Casual		
11	Int'l Coffee Day	October	1			MLK Day	Stories	MLK Day	Casual		
12						New Year's Day	Parade	New Year's Day	Dress		
13						President's Day	Vacation	President's Day	Casual		
14						St. Patrick's Day	Shamrocks	St. Patrick's Day	Casual		
15						Thanksgiving	Turkey	Thanksgiving	Dress		
16						Valentine's Day	Kisses	Valentine's Day	Dress		
17						Vernal Equinox	Reflection	Vernal Equinox	Casual		
18						Winter Solstice	Snow	Winter Solstice	Dress		
19											



BEGINNER

Ceiling
Wall
Control-Z
Control-Y
Control-End
Command-Right
Command-Down



INTERMEDIATE

Paste Values
Filter
=UNIQUE
Summary Shortcuts
PivotTables
&
=FIND/=MID



ADVANCED

=VLOOKUP
=XLOOKUP