



Essential Formulae

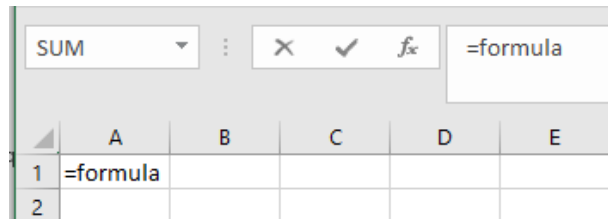
In Microsoft Excel



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The Basics

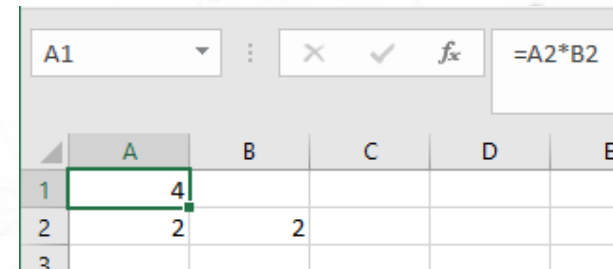
Formulae all begin with =



A screenshot of an Excel spreadsheet. The formula bar at the top shows '=formula'. The spreadsheet grid has columns labeled A through E and rows 1 and 2. Cell A1 contains the text '=formula'.

	A	B	C	D	E
1	=formula				
2					

Cells can reference other cells



A screenshot of an Excel spreadsheet. The formula bar at the top shows '=A2*B2'. The spreadsheet grid has columns labeled A through E and rows 1, 2, and 3. Cell A1 contains the value 4, and cell B2 contains the value 2.

	A	B	C	D	E
1	4				
2	2	2			
3					



The Basics

Multiply

*

Divide

/

Exponential

^

Add

+

Subtract

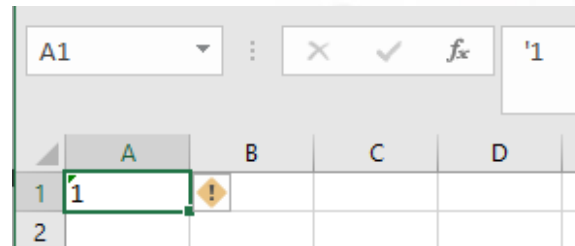
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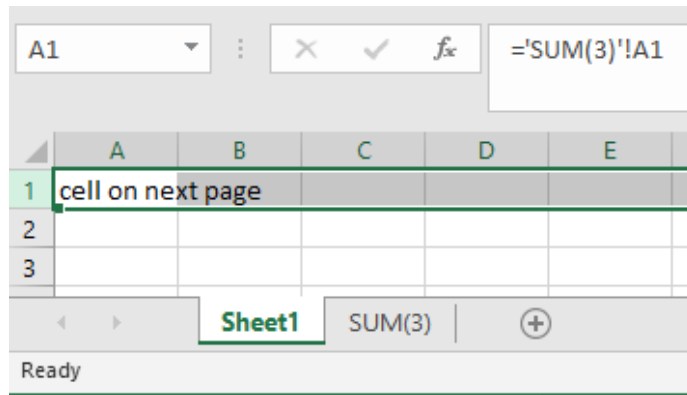
Simple Trick

Use ' before an item
to allow it to be
exactly as you want



The Basics

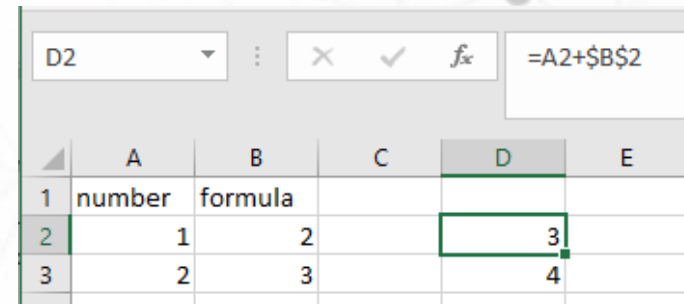
Cross references
can work across
sheets



The screenshot shows an Excel spreadsheet with a formula bar at the top displaying `=SUM(3)!A1`. The spreadsheet has columns A through E and rows 1 through 3. Cell A1 contains the text "cell on next page". The sheet tab at the bottom is labeled "Sheet1".

	A	B	C	D	E
1	cell on next page				
2					
3					

Cells can be
specified



The screenshot shows an Excel spreadsheet with a formula bar at the top displaying `=A2+B2`. The spreadsheet has columns A through E and rows 1 through 3. Cell A1 contains the text "number", and cell B1 contains the text "formula". Cell D2 is selected and contains the value 3. Cell D3 contains the value 4.

	A	B	C	D	E
1	number	formula			
2	1	2		3	
3	2	3		4	



Basic Formula

=SUM(a, b, c)

A5		fx =SUM(A1,A2,A3,A4)				
	A	B	C	D	E	F
1	1					
2	2					
3	3					
4	4					
5	10					
6						

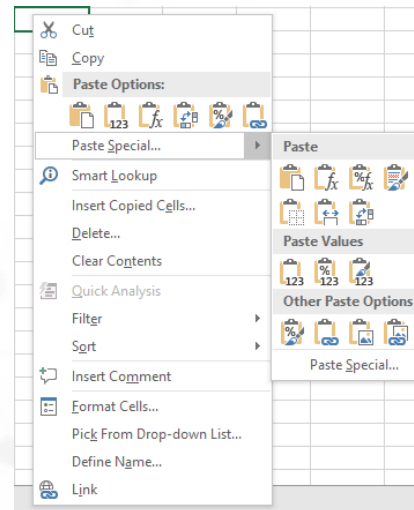
=SUM(a:f)

A5		fx =SUM(A1:B4)			
	A	B	C	D	E
1	1	1			
2	2	2			
3	3	3			
4	4	4			
5	20				



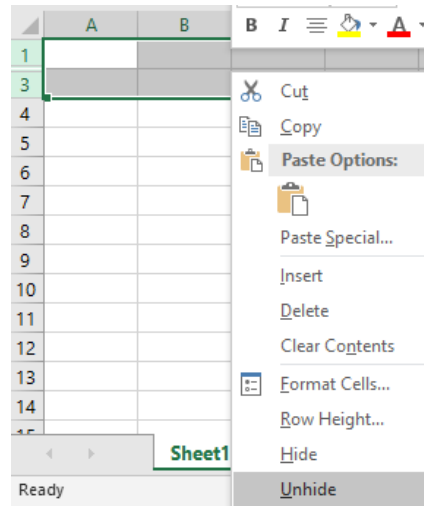
Paste Methods

Right click to access
paste special

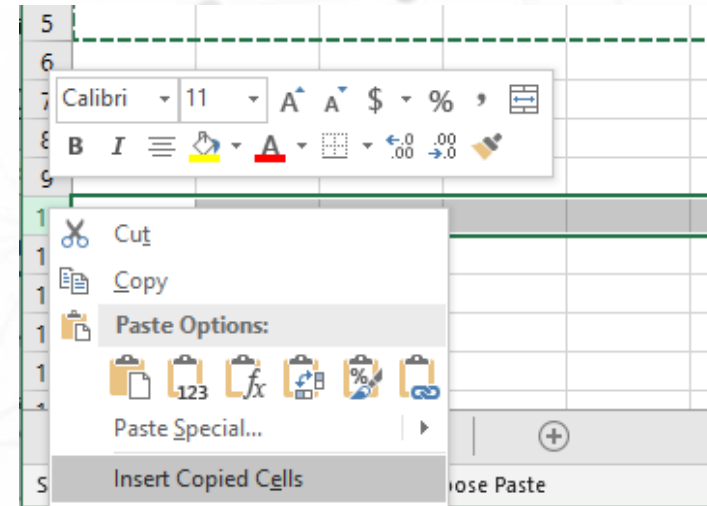


Managing Rows/Columns

Rows/columns can be hidden



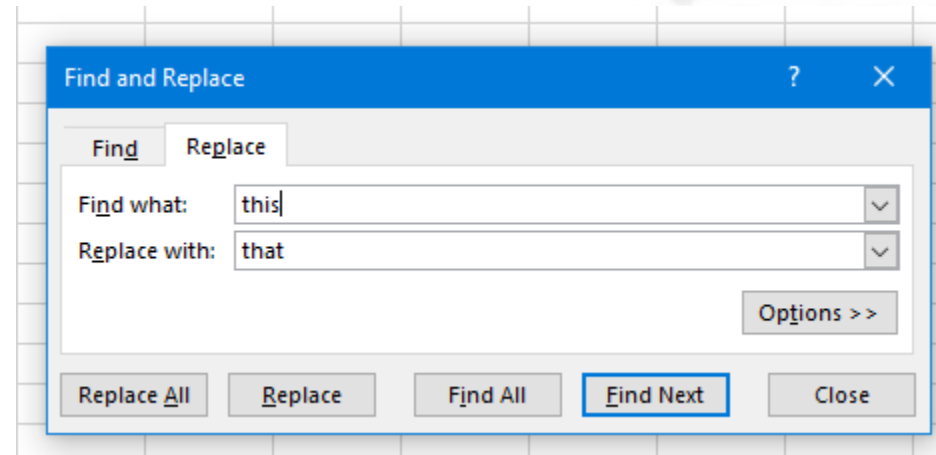
Rows/columns can be inserted/cut/copied



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Find and Replace

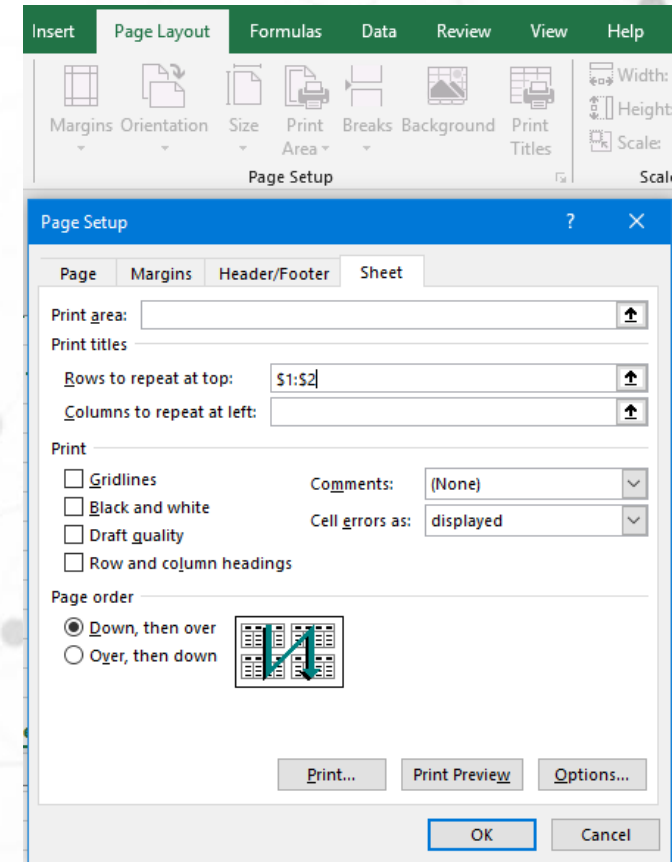
Ctrl+F



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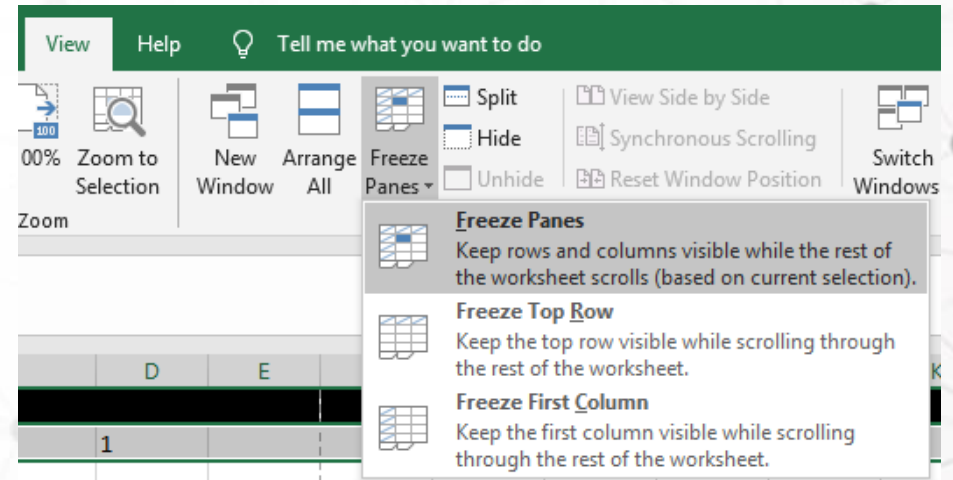
Repeat Rows at Top

Rows/columns can be repeated for printing



Freeze Panes

Rows/columns can be locked for working



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So that's the basics...



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Text to Columns

Divide data into pieces
based on common
separators

	A	B	C	D
1	AR-10-3001-A			
2	AR	10	3001	A

Convert Text to Columns Wizard - Step 2 of 3

This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.

Delimiters

☐ Tab
☐ Semicolon
☐ Comma
☐ Space
☒ Other: |

☐ Treat consecutive delimiters as one

Text qualifier: "

Data preview

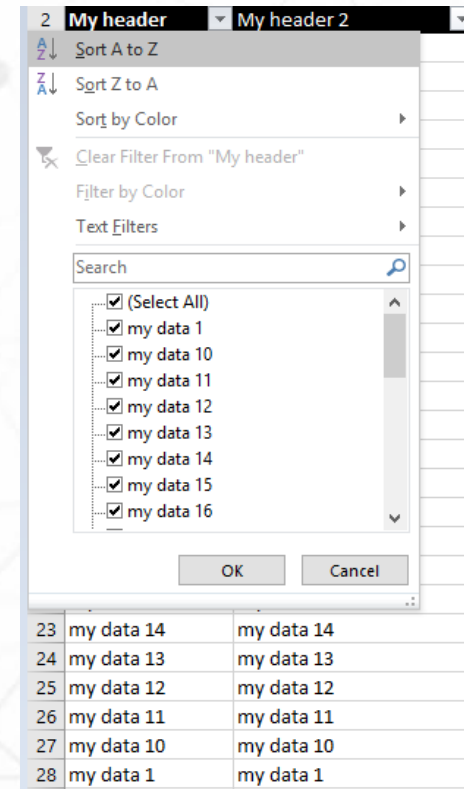
AR 10 3001 A

Cancel < Back Next > Finish



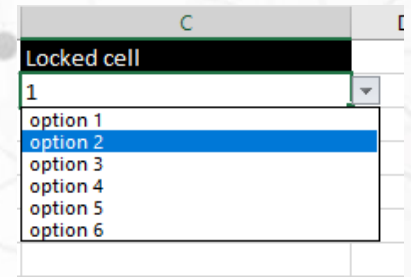
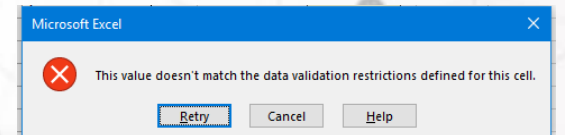
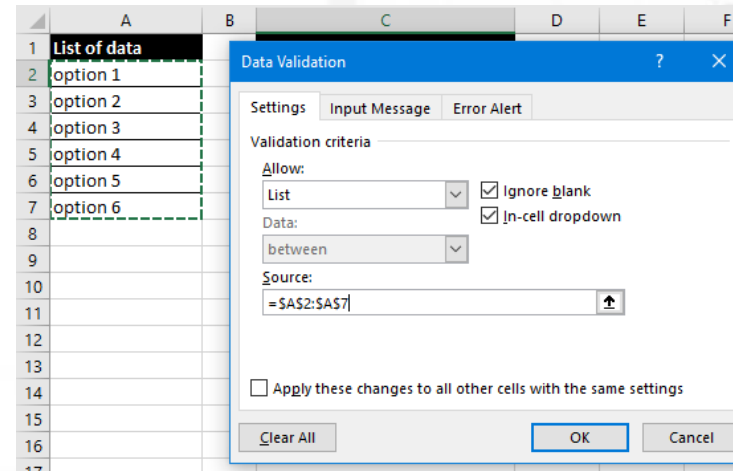
Filtering and Sorting

Filter data based on conditions or reorder entire tables



Data Validation

Limit a cell's
possible values
to a range or list



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Intermediate Formulae

=CONCATENATE(a, b, c)

C3			f_x =CONCATENATE(A1,C6,A2,C6,A3,C6)
	A	B	C
1	one		onetwothree
2	two		
3	three		one mississippi, two mississippi, three mississippi,
4			
5			VV VARIABLE VV
6			mississippi,
7			



Intermediate Formulae

=SUBSTITUTE(a, b, c)

AKA in a, replace b with c

C3			f_x =CONCATENATE(A1,C6,A2,C6,A3,C6)
	A	B	C
1	one		onetwothree
2	two		
3	three		one mississippi, two mississippi, three mississippi,
4			
5			VV VARIABLE VV
6			mississippi,
7			



Intermediate Formulae

=LEFT(a, x) and =RIGHT(a,x)

Find x most characters in a

A2		fx		=LEFT(A1, 8)	
A		B			
1	clifford is red				
2	clifford				

A2		fx		=RIGHT(A1, 3)	
A		B			
1	clifford is red				
2	red				



Intermediate Formulae

=FIND(a, b, c)

Find a in b, starting from c

A2	=FIND(" ",A1,1)
A	B
1 clifford is red	
2 9	
3 clifford	
4 clifford	



Combining Formulae

Combine Left/Right and Find
to capture sub-strings!

A4		fx		=LEFT(A1,(FIND(" ",A1,1)-1))	
	A	B	C		
1	clifford is red	william is blue	fred is green		
2					
3					
4	clifford	william	fred		
5					



Logic Gates

IF, AND, OR, NOT

B6		fx =IF(OR(B1="red",B1="blue"), "it isn't green", "it's green!")				
	A	B	C	D	E	F
1	clifford	green				
2	william	blue				
3	fred	red				
4						
5						
6	is it red?	it's green!				



Complex Function

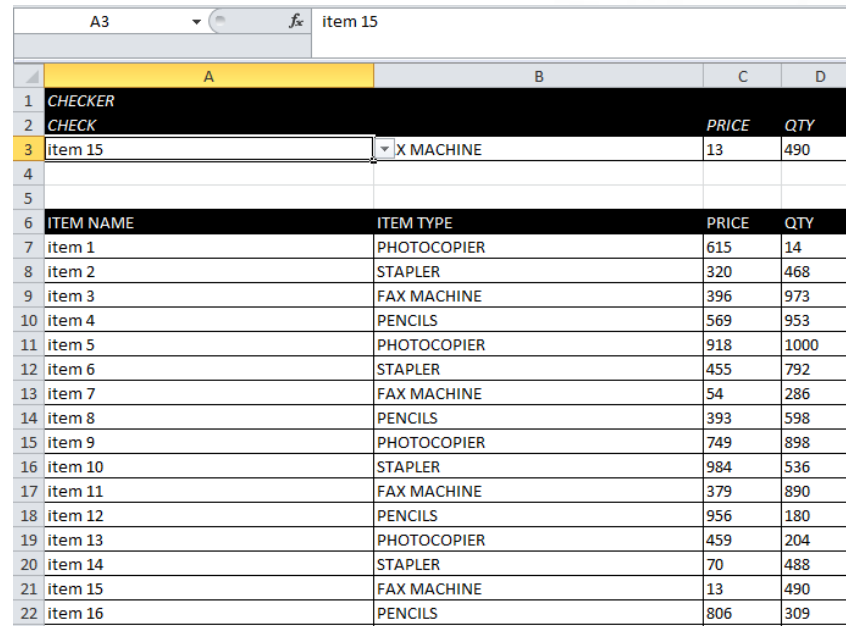
=VLOOKUP(a, b, c, FALSE)

Find value a in range b, then return the value
in column c as an exact match



Combining Formulae and Formatting

VLOOKUP and data validation can be combined for inventory checkers etc.



	A	B	C	D
1	CHECKER			
2	CHECK		PRICE	QTY
3	item 15	X MACHINE	13	490
4				
5				
6	ITEM NAME	ITEM TYPE	PRICE	QTY
7	item 1	PHOTOCOPIER	615	14
8	item 2	STAPLER	320	468
9	item 3	FAX MACHINE	396	973
10	item 4	PENCILS	569	953
11	item 5	PHOTOCOPIER	918	1000
12	item 6	STAPLER	455	792
13	item 7	FAX MACHINE	54	286
14	item 8	PENCILS	393	598
15	item 9	PHOTOCOPIER	749	898
16	item 10	STAPLER	984	536
17	item 11	FAX MACHINE	379	890
18	item 12	PENCILS	956	180
19	item 13	PHOTOCOPIER	459	204
20	item 14	STAPLER	70	488
21	item 15	FAX MACHINE	13	490
22	item 16	PENCILS	806	309



