

# Google Sheets

## Google Web Applications

Google web applications are a set of web pages that perform certain standard tasks, such as email, word processing and spreadsheets. These are different from applications you download and run on your computer since they are all done in a web browser.

<b>Google App</b>	<b>Type</b>	<b>Programs That Do Similar Tasks</b>
Gmail	Email	Microsoft Outlook, AOL, Yahoo Mail
Google Docs	Word Processing	Microsoft Word, Apple Pages, LibreOffice
Google Sheets	Spreadsheet	Microsoft Excel, Apple Numbers LibreOffice Calc
Google Calendar	Calendar	Microsoft Outlook
Google Contacts	Contacts	Apple Contacts, Microsoft Contact Organizer

Google also makes a browser program called Chrome which must be installed on your device (if it does not come with it). Other popular browser programs are Safari, Firefox, Microsoft Edge and Opera.

# Google Sheets

Google Sheets is a simple and powerful spreadsheet application that has similar features to the other spreadsheet programs. It does not have some of their advanced features but probably fine for most users. A spreadsheet program is used to store rows and columns of data and optionally do calculations on them.

It has the advantage that your documents are kept on the Cloud (Internet) on Google computers and are associated with your Google Account. That means that you have to sign up for a Google account to use if you don't already have one. It also means you can access your documents anywhere in the world on any device that connects to the Internet. You simply have to log into your Google account to access them.

To access Google Sheets, you can go to the Google Sheets website

<https://sheets.google.com>

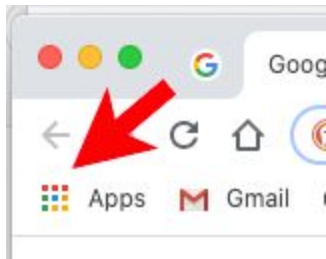
This will redirect you to this web address:

<https://docs.google.com/spreadsheets/u/0/>

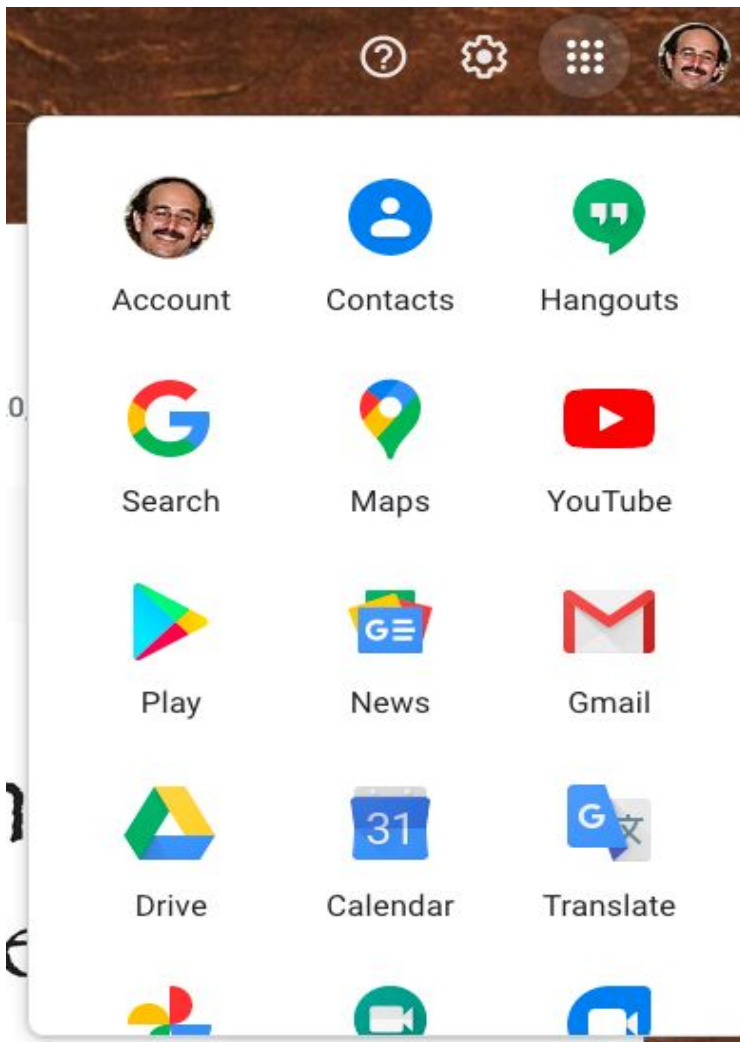
You can also click the Google Apps icon on Gmail which is in the upper right part of the window and looks like a three by three square of dots:



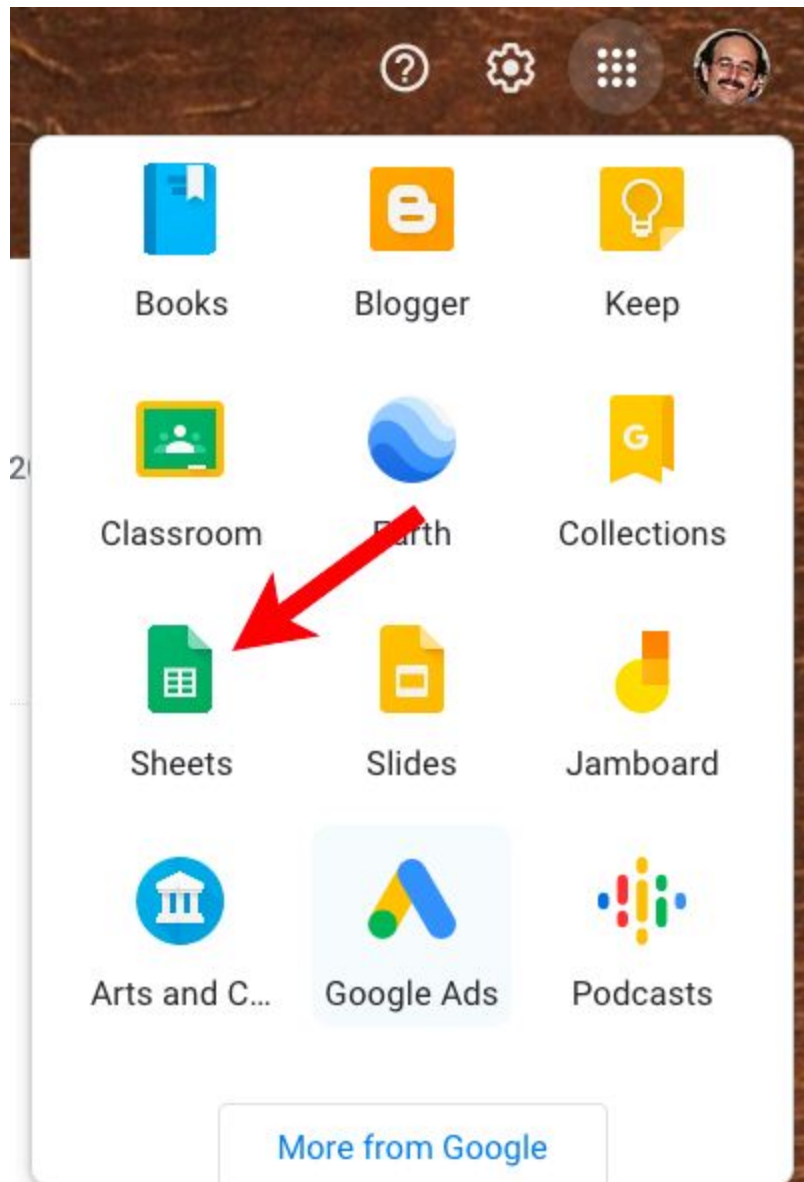
If you use the Chrome browser, the three by three “tic tac toe” board is colored and the first button on your Bookmark Toolbar:



When you click on one of these buttons, it will bring up a popup window with the Google Apps:



If scroll down, you will see the Google Sheets button:

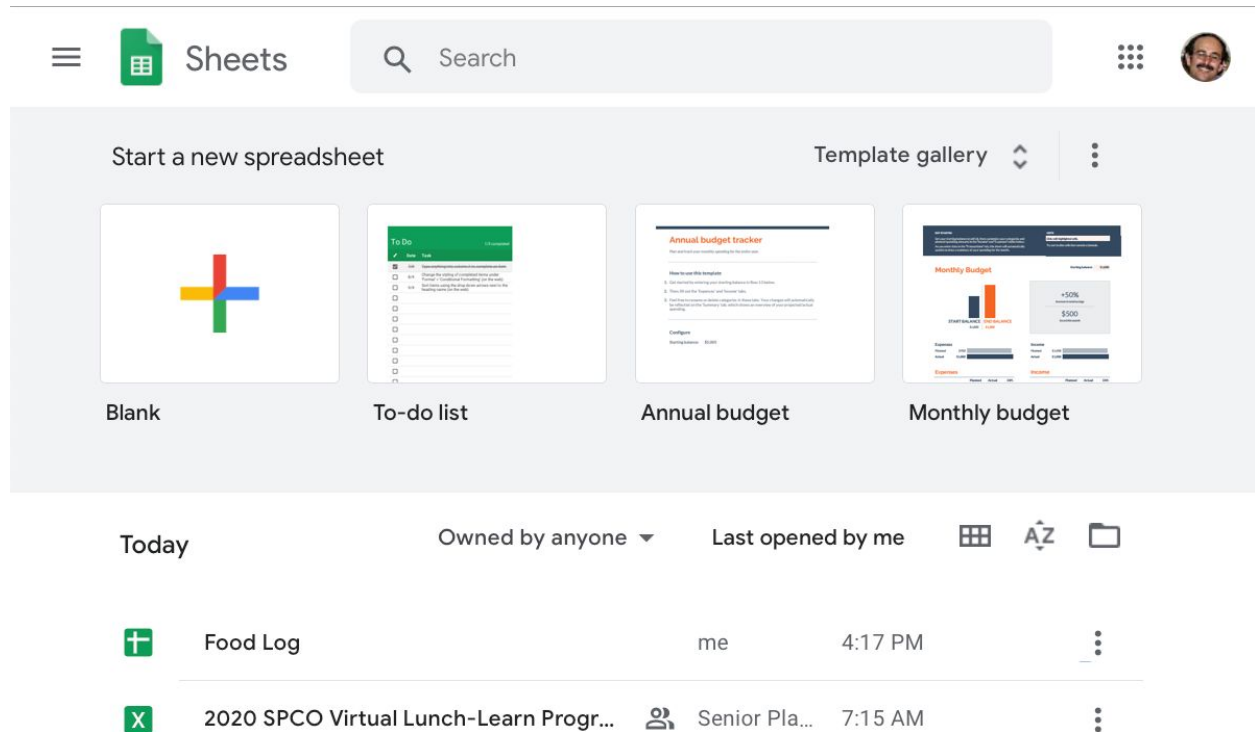


This will open up Google Sheets in the current window or a new browser tab depending on how your browser preferences are set up.

You can create lots of useful documents with this tool.

# Creating a Spreadsheet

When you first go to the Google Sheets web page, it shows you various templates you can use to start a new document or you can create a blank spreadsheet:



Below the templates are your recent spreadsheets that you have edited. There is also a search box at the top (next to the magnifying glass) to search for a specific document by name.

# Spreadsheet Cells, Rows, Columns

A spreadsheet is a set of data cells arranged in rows and columns.

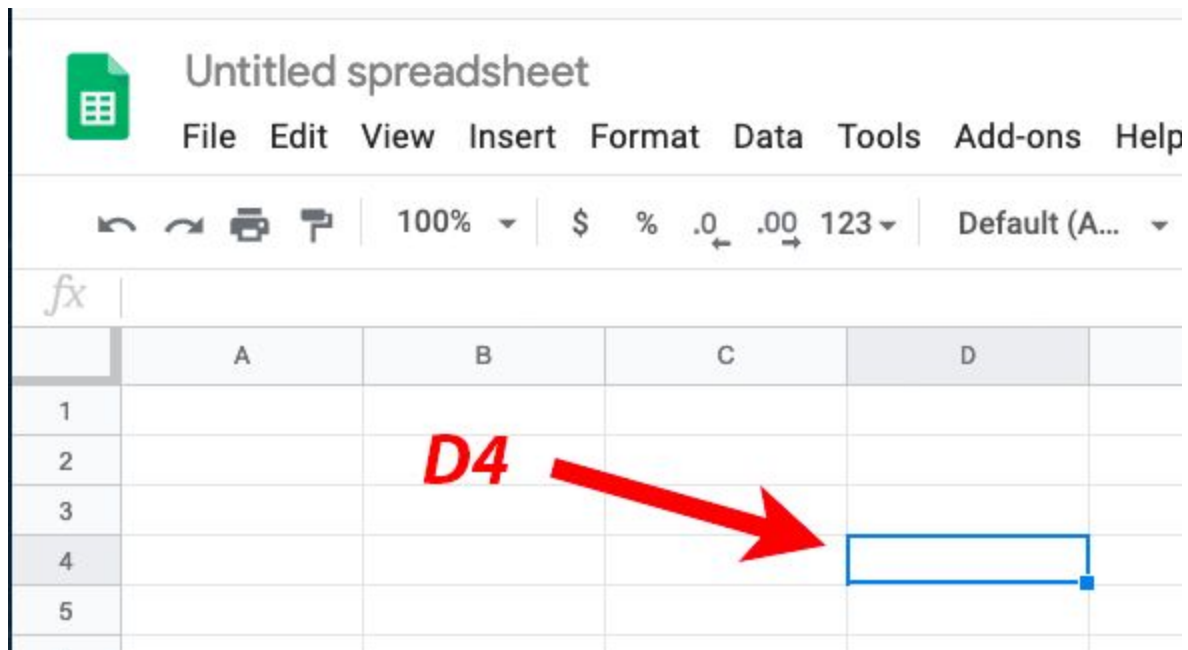
Columns are labeled with letters (A, B, C, etc.)

Rows are labeled with numbers (1, 2, 3, etc.)

For example

**D4**

refers to row 4 of column D

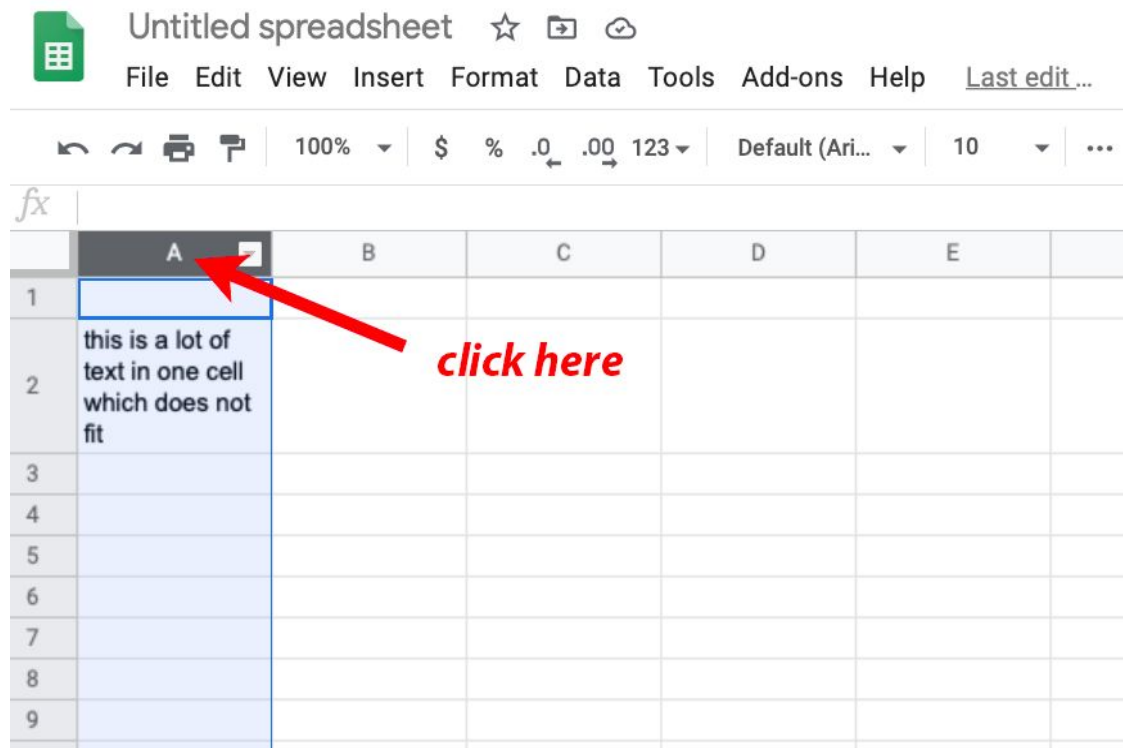


Cells can contain data (numbers, text, dates) or formulas.

Formula cells have values that start with the equals character (=). If you want to enter text that starts with the equals character, put a single quote before the text, e.g.

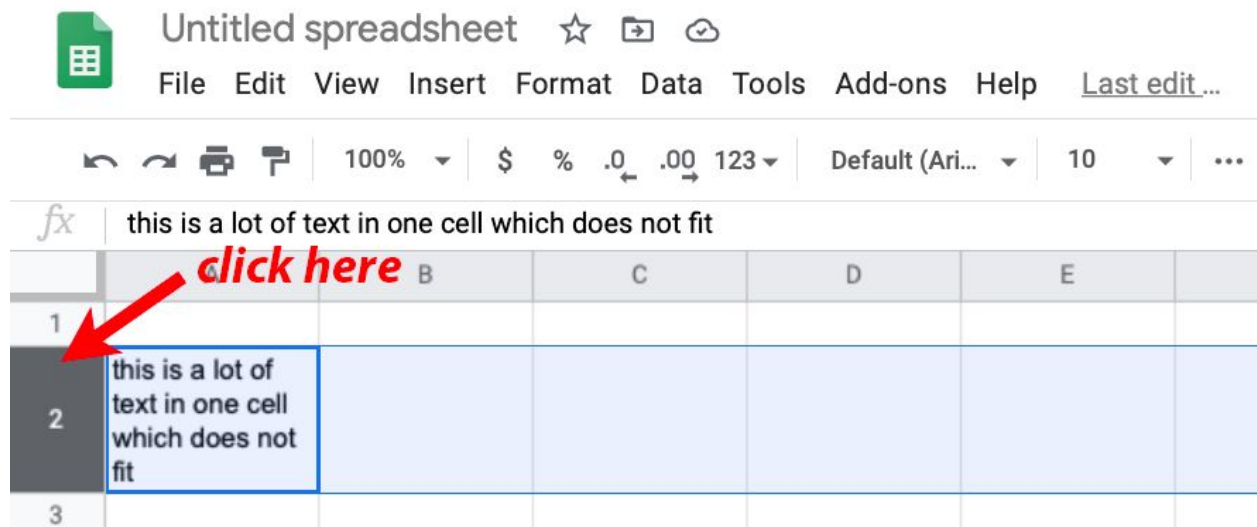
**'= some text here**

To select a column, click on the header (the letter above the column)

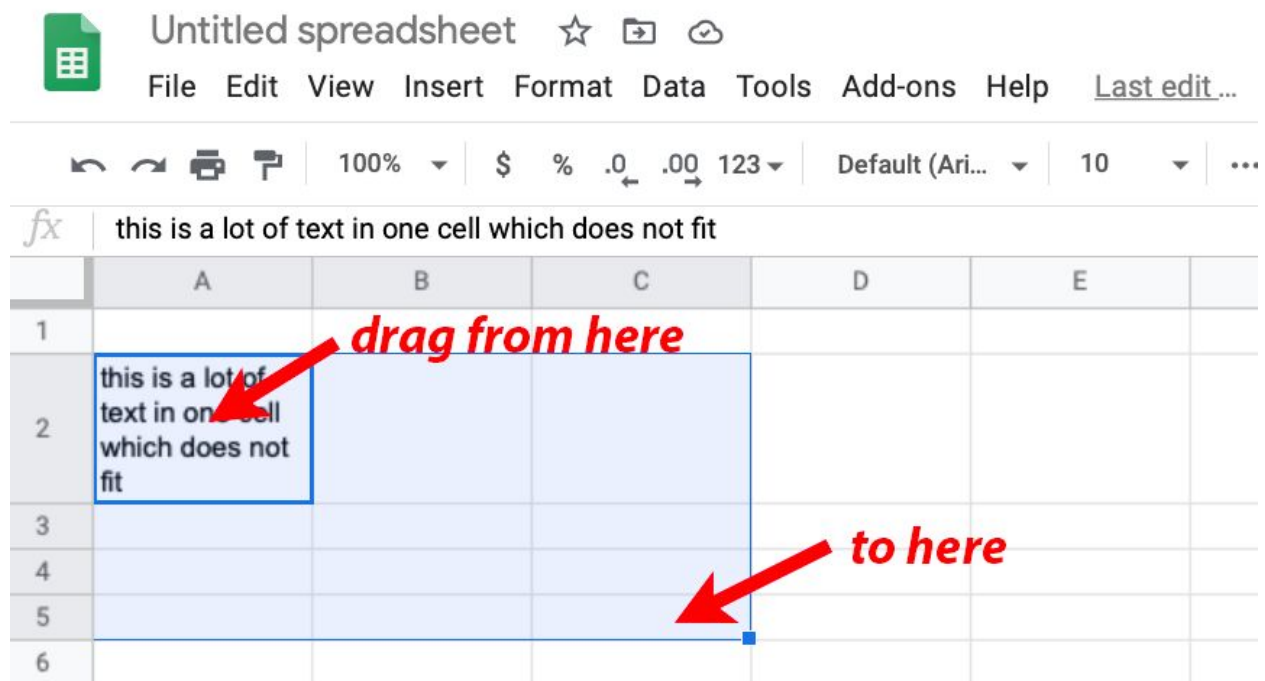


This selects all the cells in a column and they display in light blue.

To select a row click on the row number to the left of the cells:

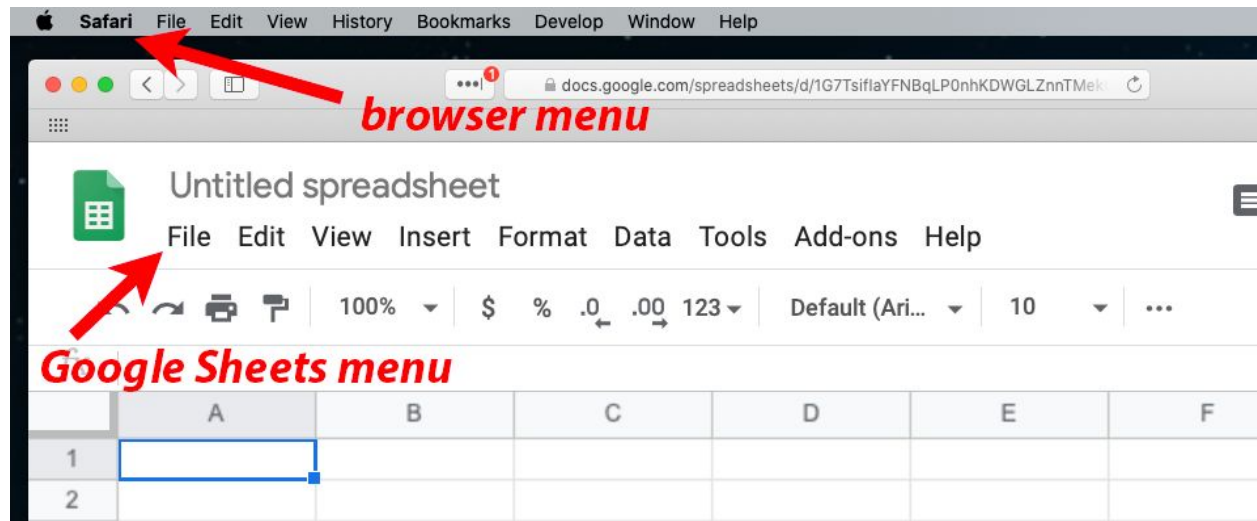


You can select a rectangle of adjacent cells by dragging across them:



# Google Sheets Menu

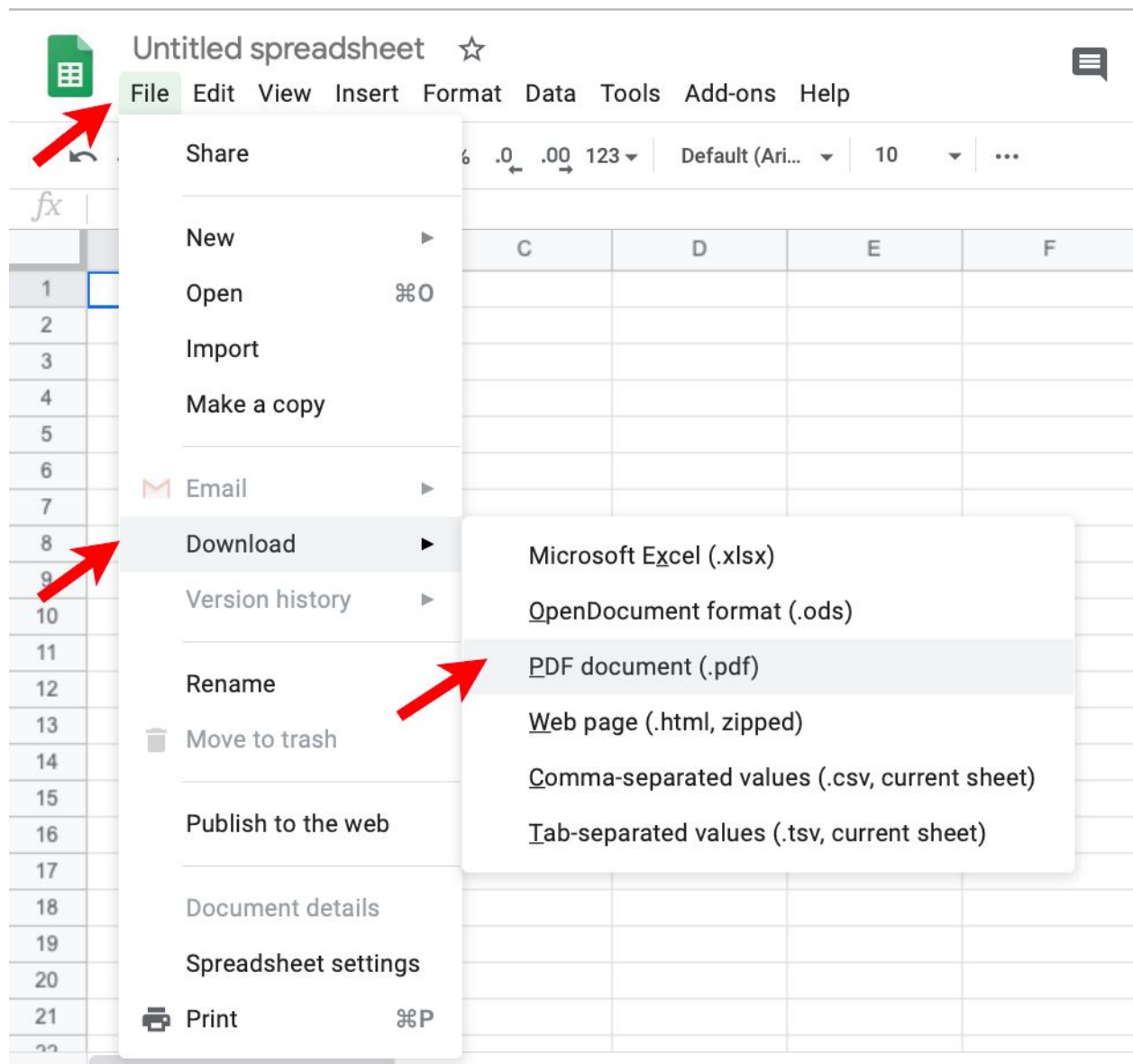
One of the most confusing things about using Google web applications is that many have a separate menu bar that is inside the browser window. In Google Sheets, this is what it looks like:



The menu on the top of the screen is the menu for the current program (the Safari browser in this case). The menu in the browser window under the spreadsheet title is the Google Sheets menu. They look very similar, so please don't be confused by this. Notice they both have menus with names like "File", "Edit", "View" and "Help".

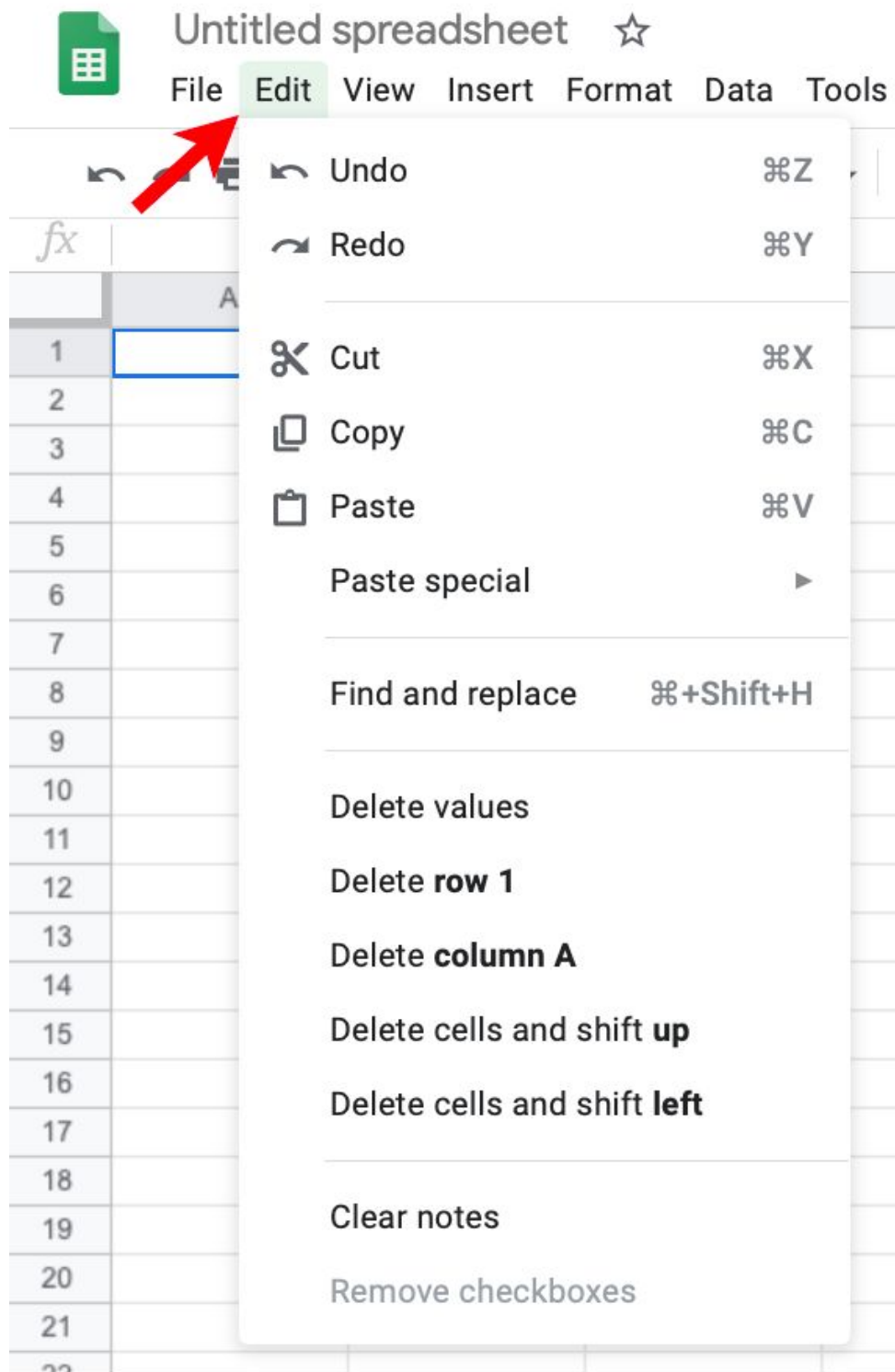
Probably the hardest thing to learn about using Google Sheets is that there is a completely different menu that you use for the spreadsheet functions.

The File menu has many options. One that is very useful is “Download”



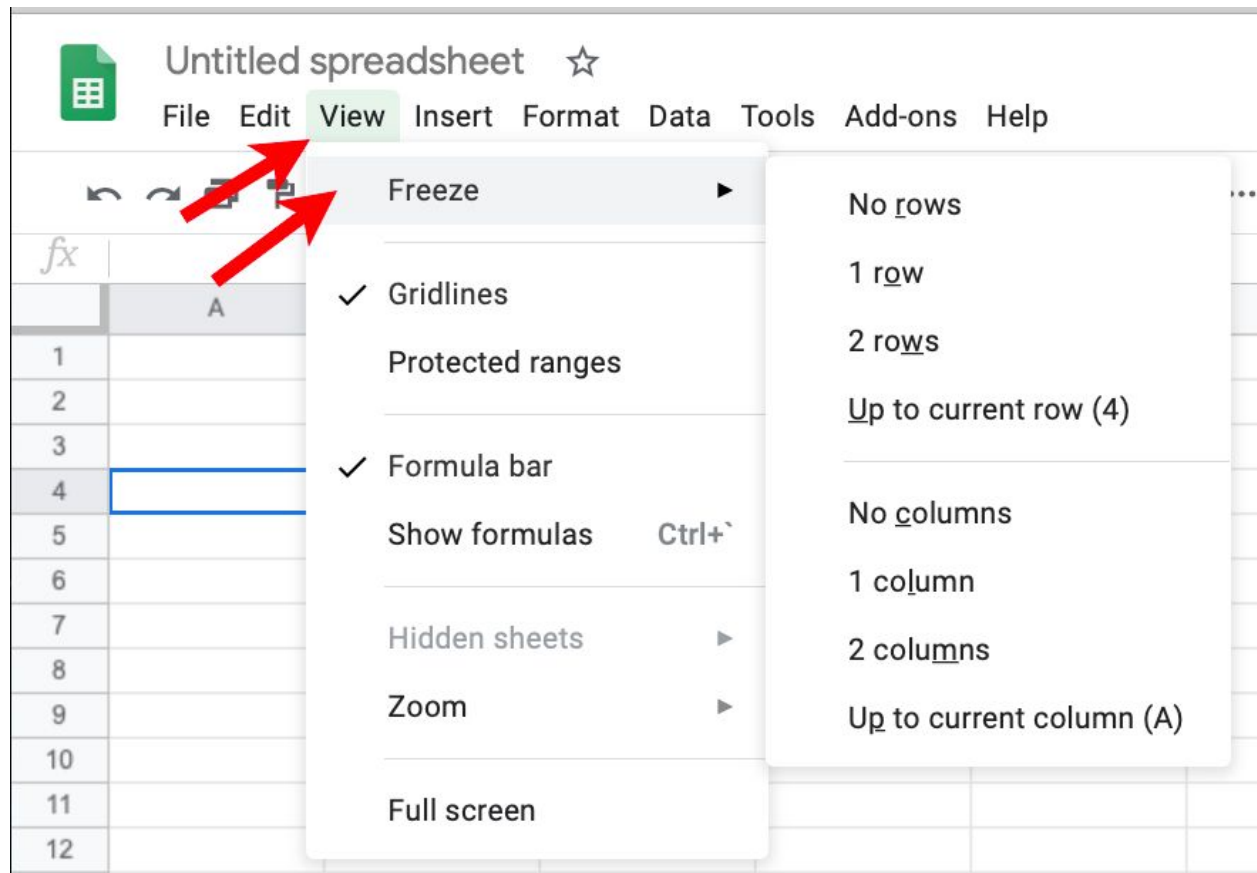
This lets you save the spreadsheet on your computer in a variety of different formats. The advantage of PDF files is that they look the same on all devices and most devices are set up to view PDF files without additional software.

The Edit menu has normal spreadsheet editing tasks like Copy, Paste, Find and Replace.



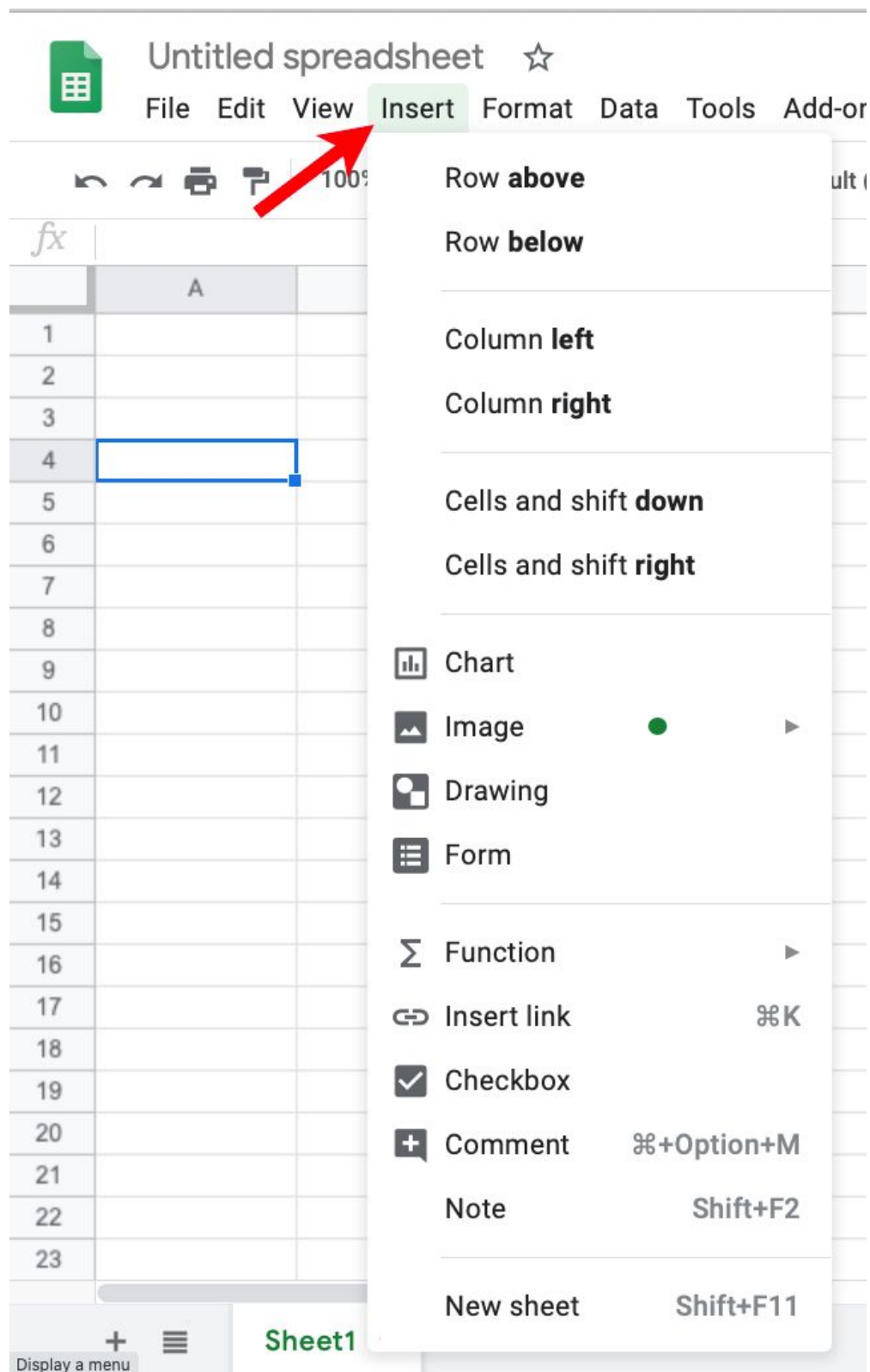
This shows the keyboard shortcuts you can use (e.g. Command / C for copy on the Mac). This is normally Control / C on a PC.

The View menu lets you control what is displayed:

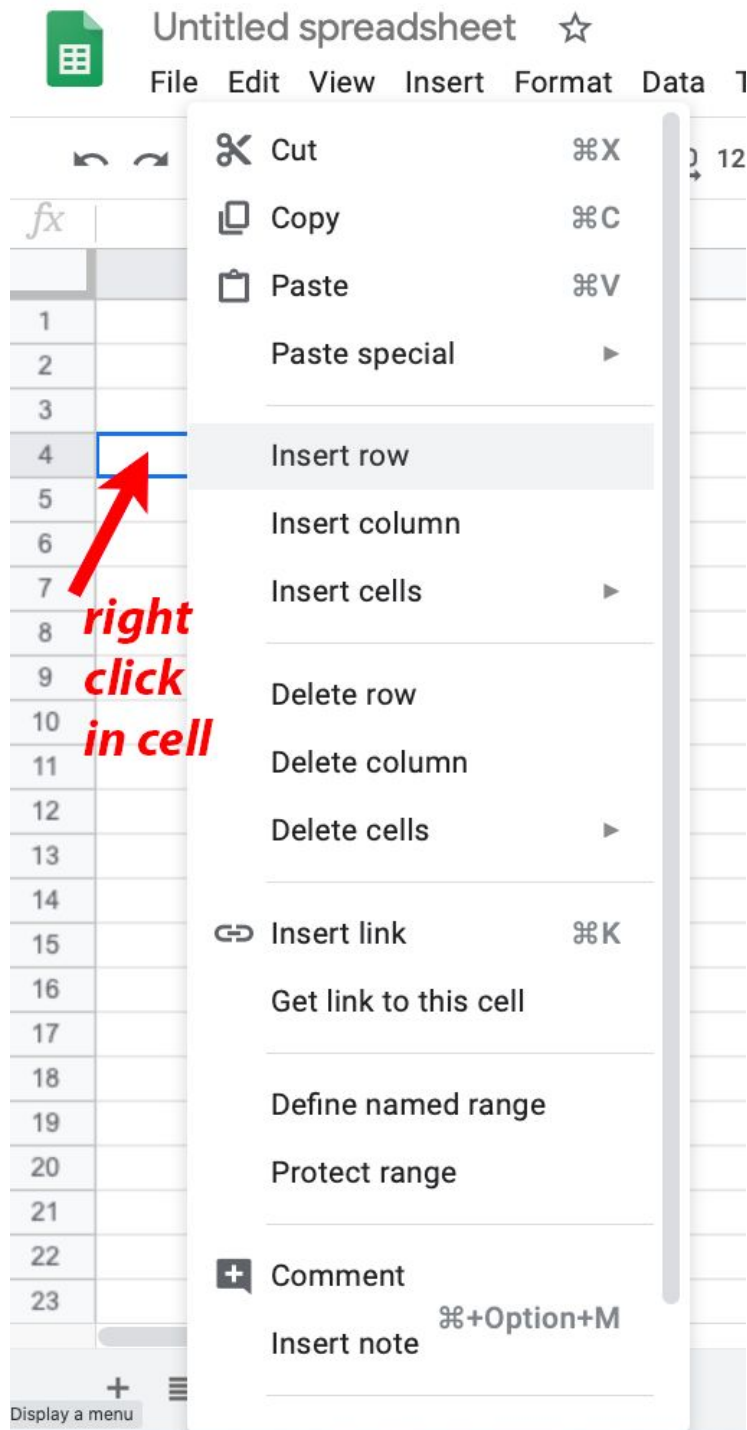


It has a Freeze option to freeze header rows so you can scroll through the document and these rows will stay in place. You can also freeze columns if the document is very wide.

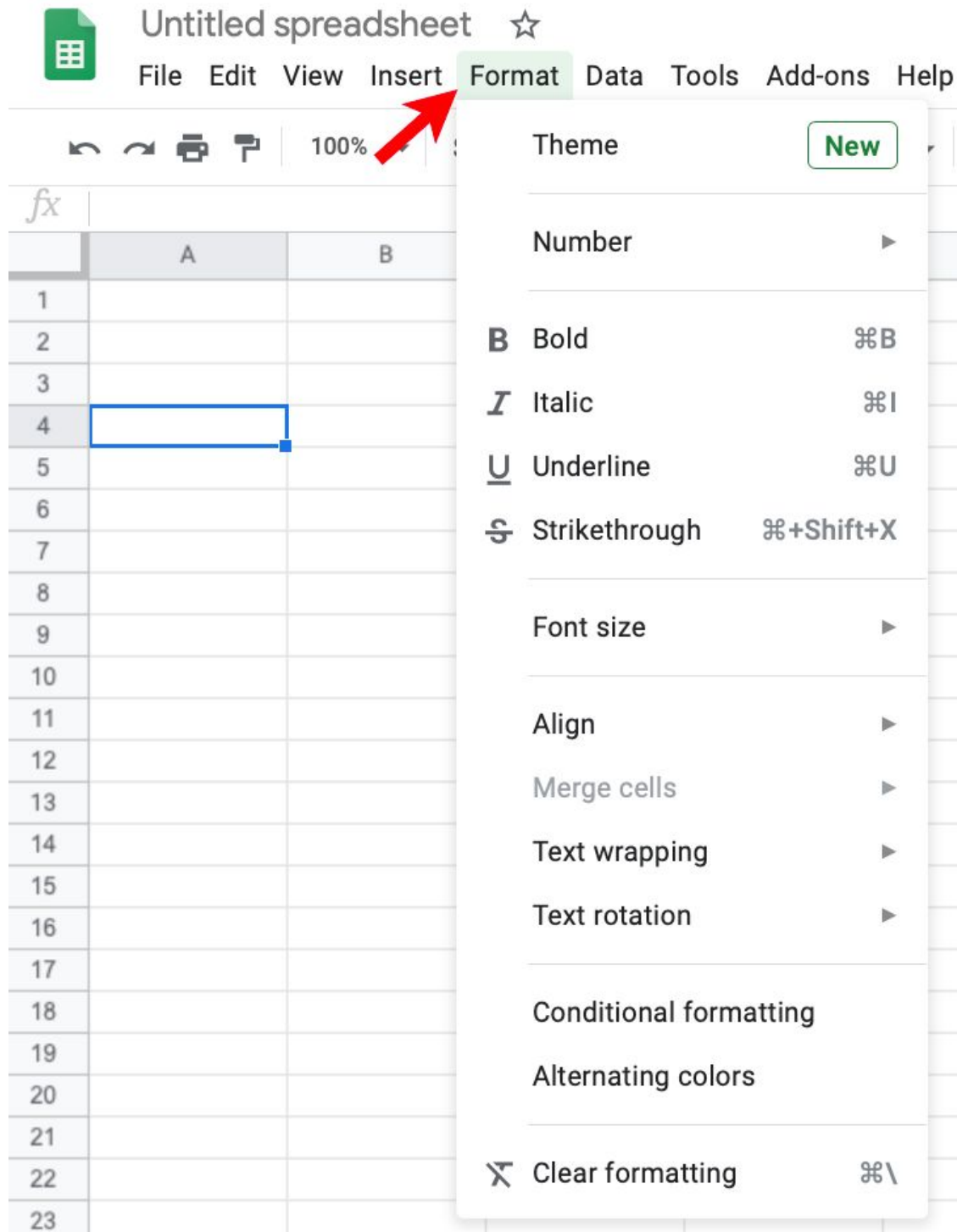
The Insert menu has lots of useful features:



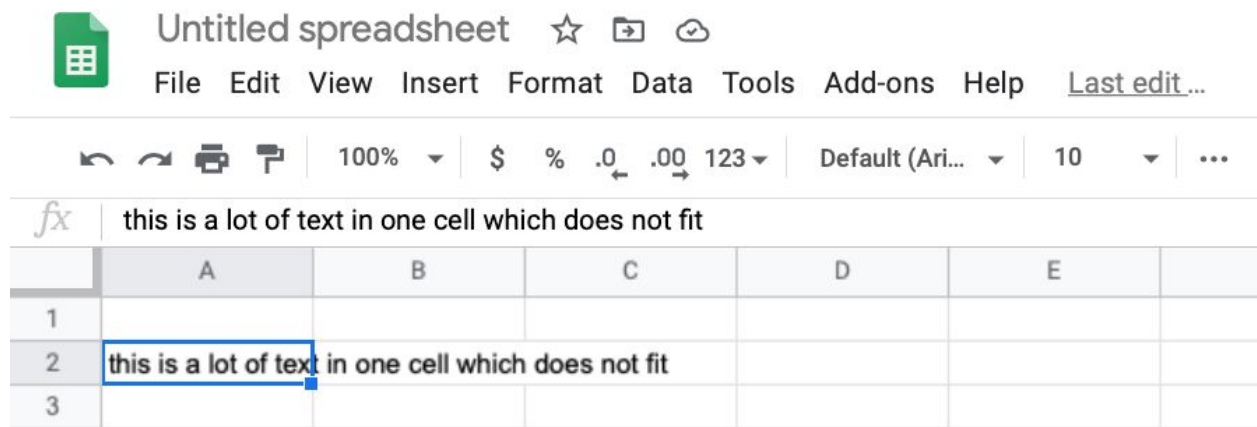
You can insert extra rows and columns. You can also access do this by selecting a cell, row or column and clicking the right mouse button to see the context sensitive menu.



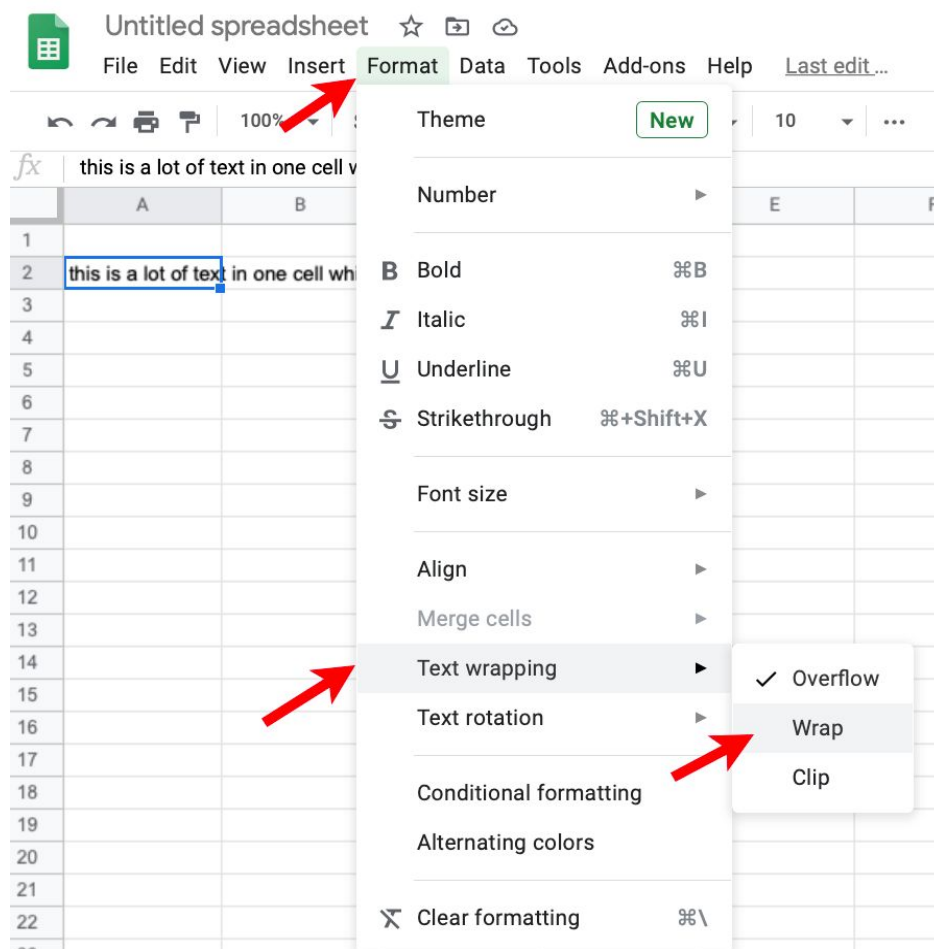
The Format menu also has lots of features.



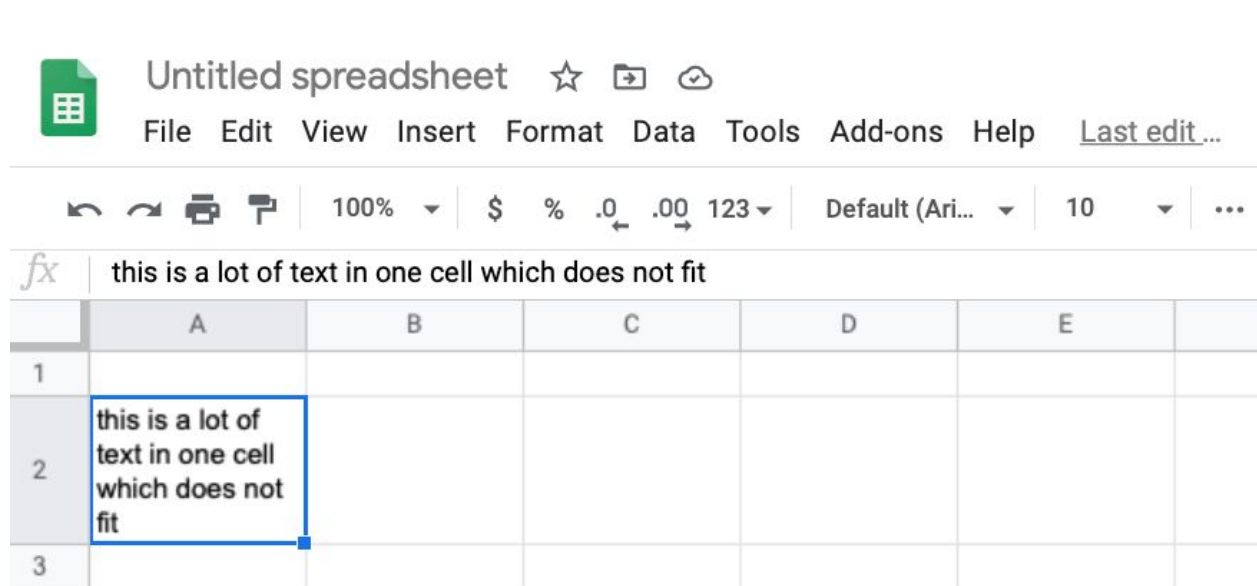
For example, if I type in a lot of text in a cell:



I can use the Format / Text Wrapping / Wrap option to fix this:

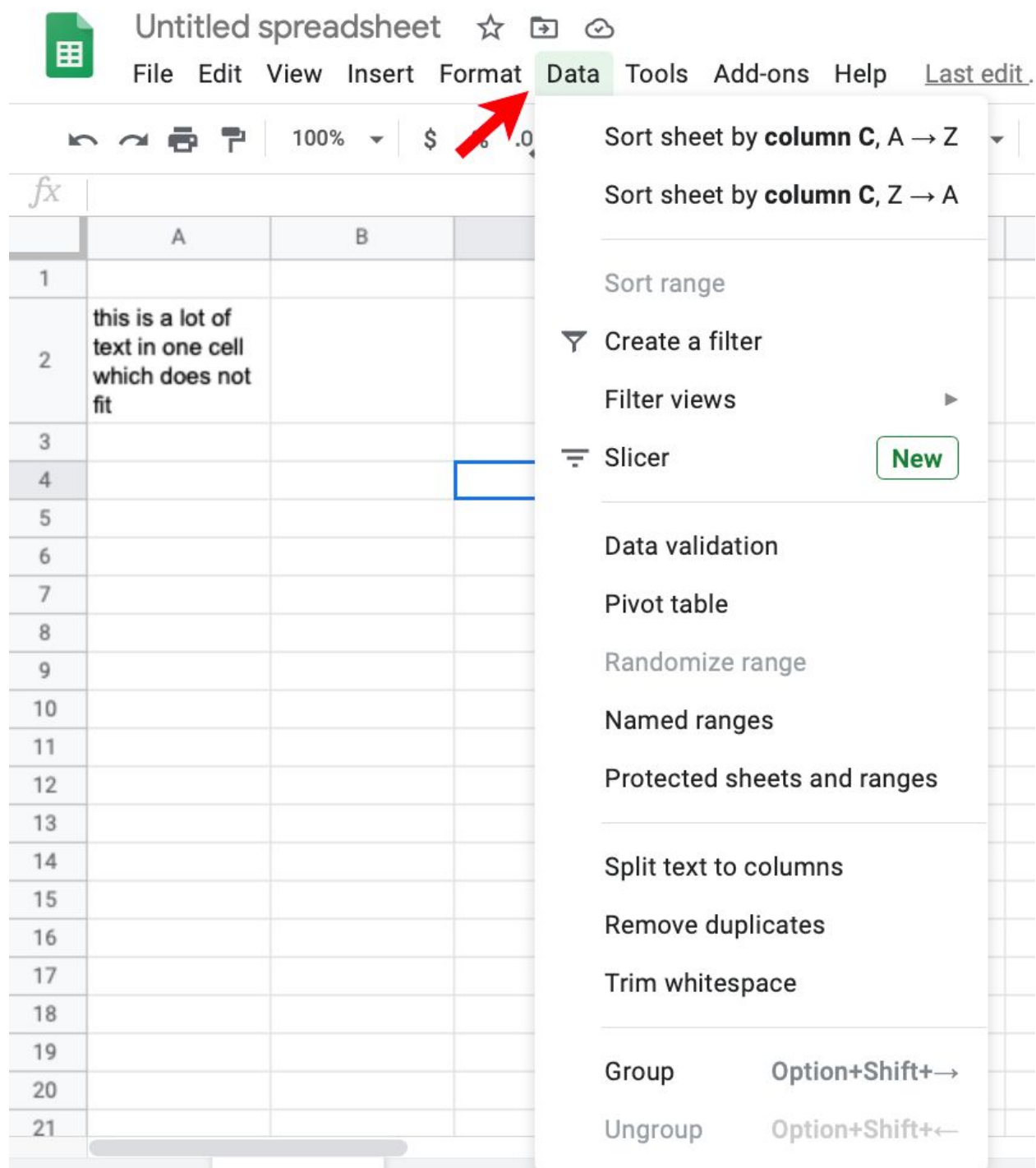


This will wrap the text in the cell:



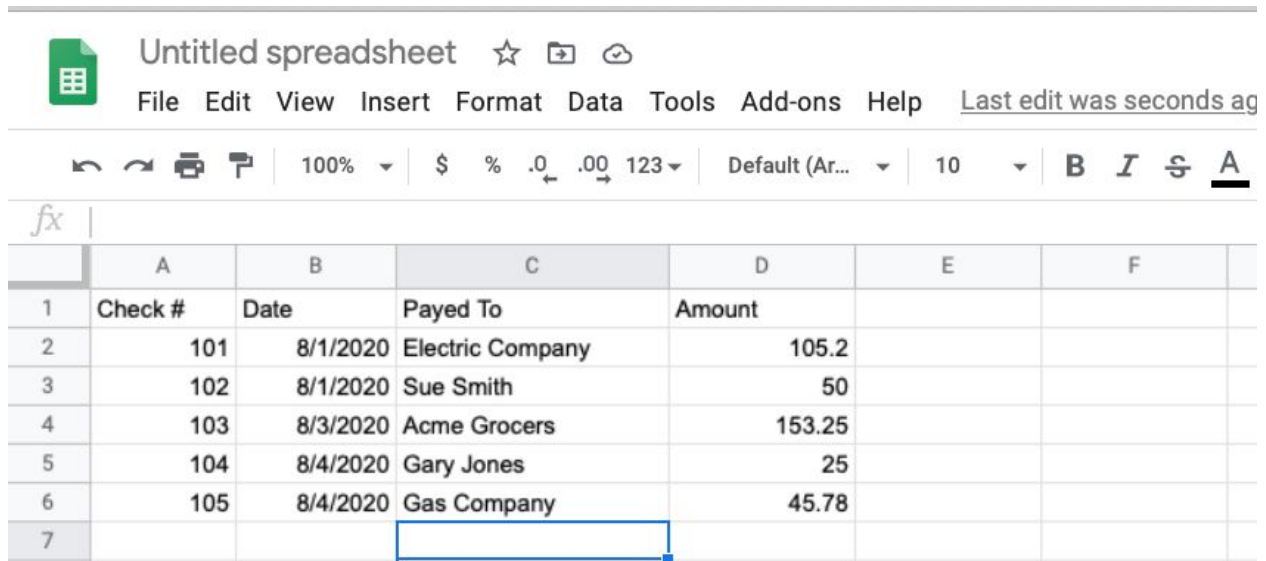
Any of the formatting options can be applied to a cell, row(s), column(s) or a rectangle of cells.

The Data menu has a number of useful functions:



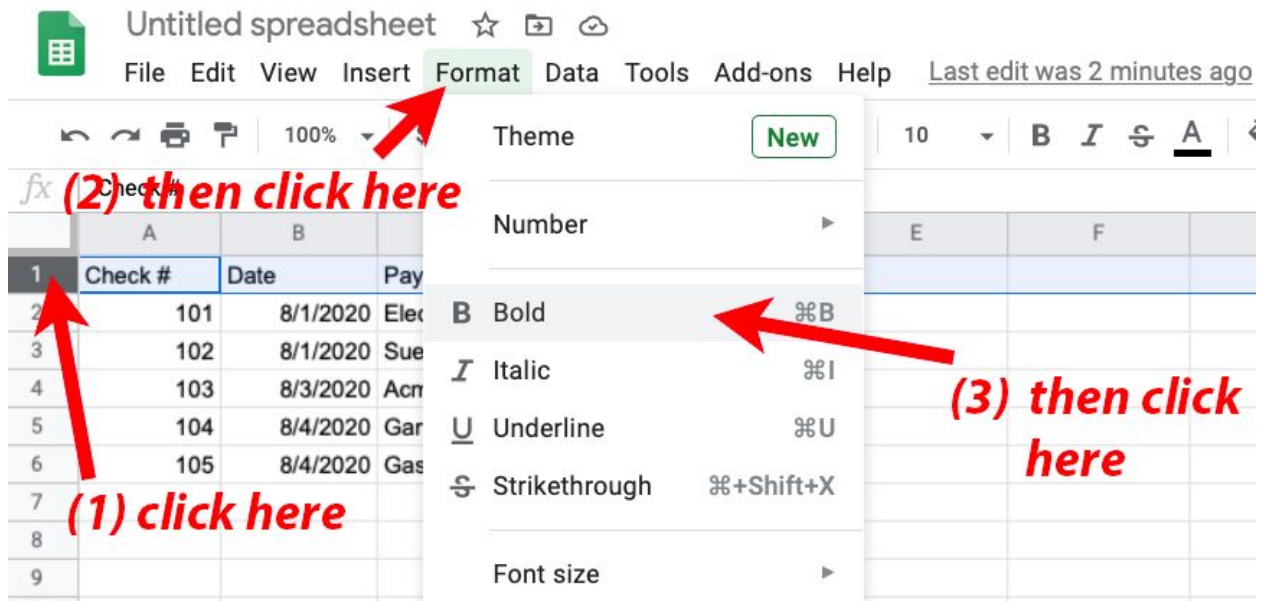
This lets you sort the data in the spreadsheet by one or more columns along with other functions like splitting text into multiple columns.

To explain some of the options so far, I have entered some simple checkbook data into a blank spreadsheet:



	A	B	C	D	E	F
1	Check #	Date	Payed To	Amount		
2	101	8/1/2020	Electric Company	105.2		
3	102	8/1/2020	Sue Smith	50		
4	103	8/3/2020	Acme Grocers	153.25		
5	104	8/4/2020	Gary Jones	25		
6	105	8/4/2020	Gas Company	45.78		
7						

The first thing I will do is highlight the first line and format it as bold:



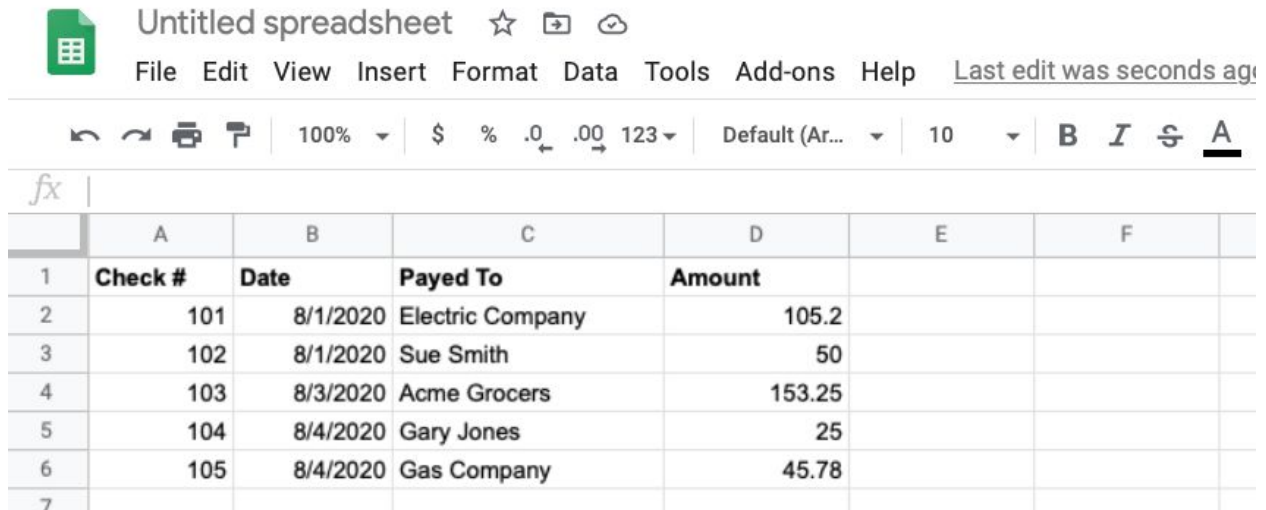
**(1) click here**

**(2) then click here**

**(3) then click here**

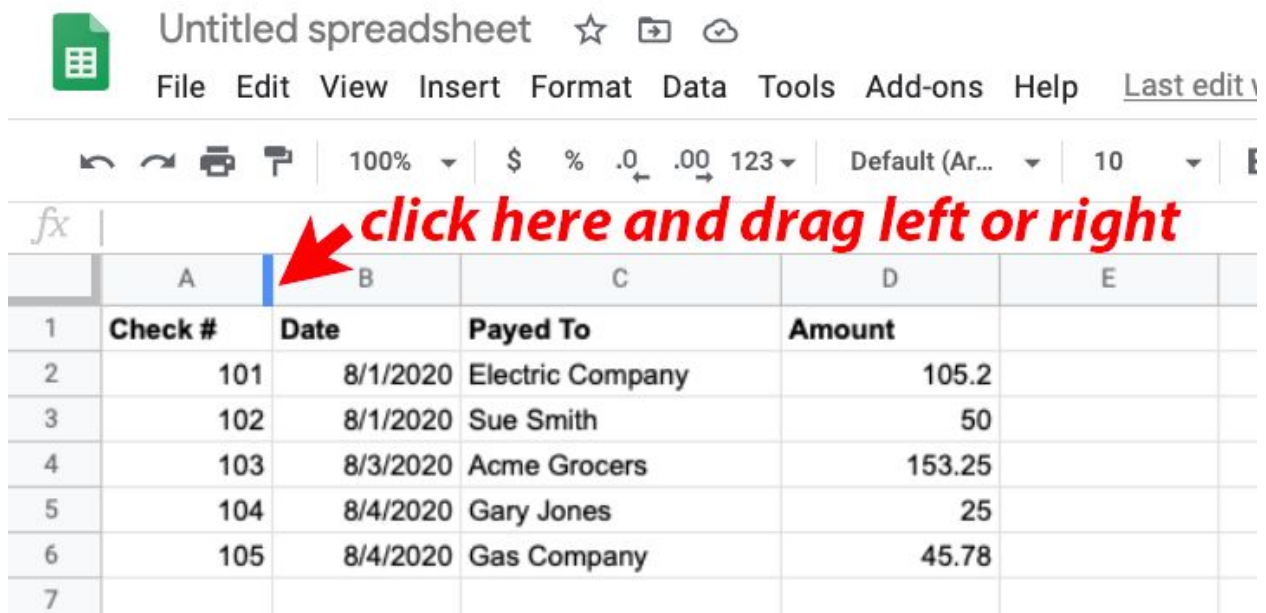
	A	B	C	D	E	F
1	Check #	Date	Pay			
2	101	8/1/2020	Elec			
3	102	8/1/2020	Sue			
4	103	8/3/2020	Acn			
5	104	8/4/2020	Gar			
6	105	8/4/2020	Gas			
7						
8						
9						

The spreadsheet now looks like this:



	A	B	C	D	E	F
1	<b>Check #</b>	<b>Date</b>	<b>Payed To</b>	<b>Amount</b>		
2	101	8/1/2020	Electric Company	105.2		
3	102	8/1/2020	Sue Smith	50		
4	103	8/3/2020	Acme Grocers	153.25		
5	104	8/4/2020	Gary Jones	25		
6	105	8/4/2020	Gas Company	45.78		
7						

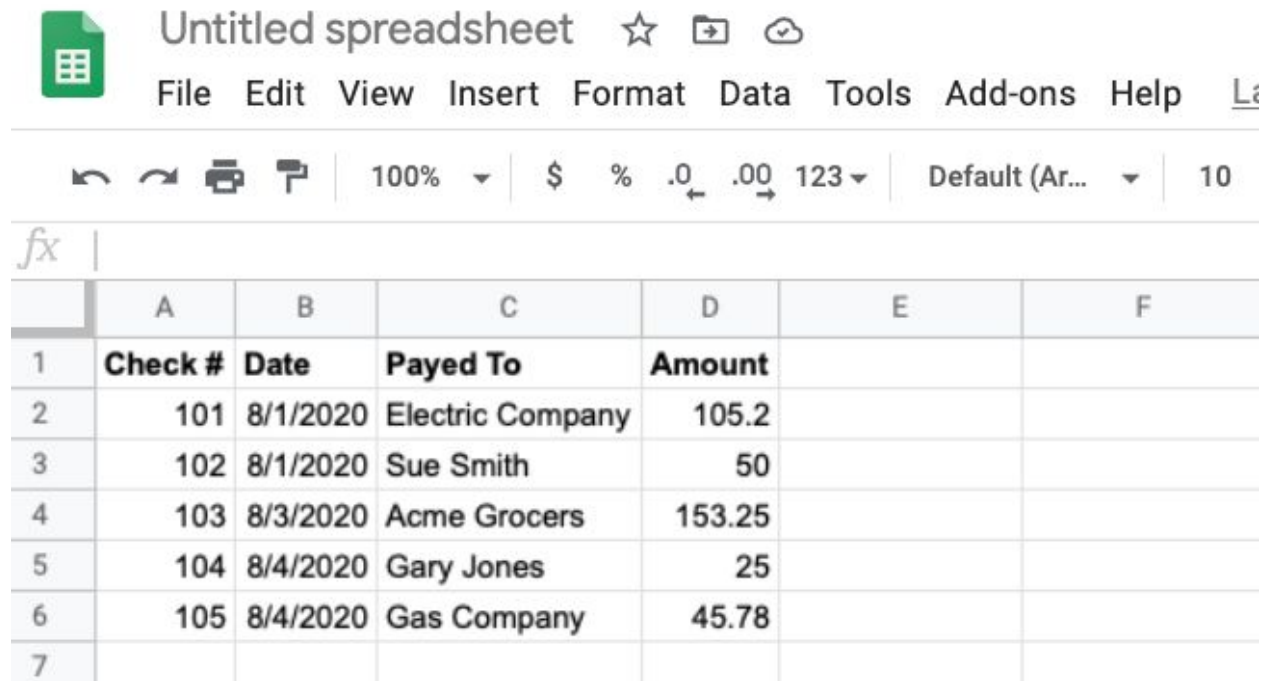
To adjust the columns to the width of the data, I can move my cursor to the small vertical line in the header row between the columns and drag left or right:



	A	B	C	D	E
1	<b>Check #</b>	<b>Date</b>	<b>Payed To</b>	<b>Amount</b>	
2	101	8/1/2020	Electric Company	105.2	
3	102	8/1/2020	Sue Smith	50	
4	103	8/3/2020	Acme Grocers	153.25	
5	104	8/4/2020	Gary Jones	25	
6	105	8/4/2020	Gas Company	45.78	
7					

If you double click on this spot, the column adjusts automatically to the width of the data in it.

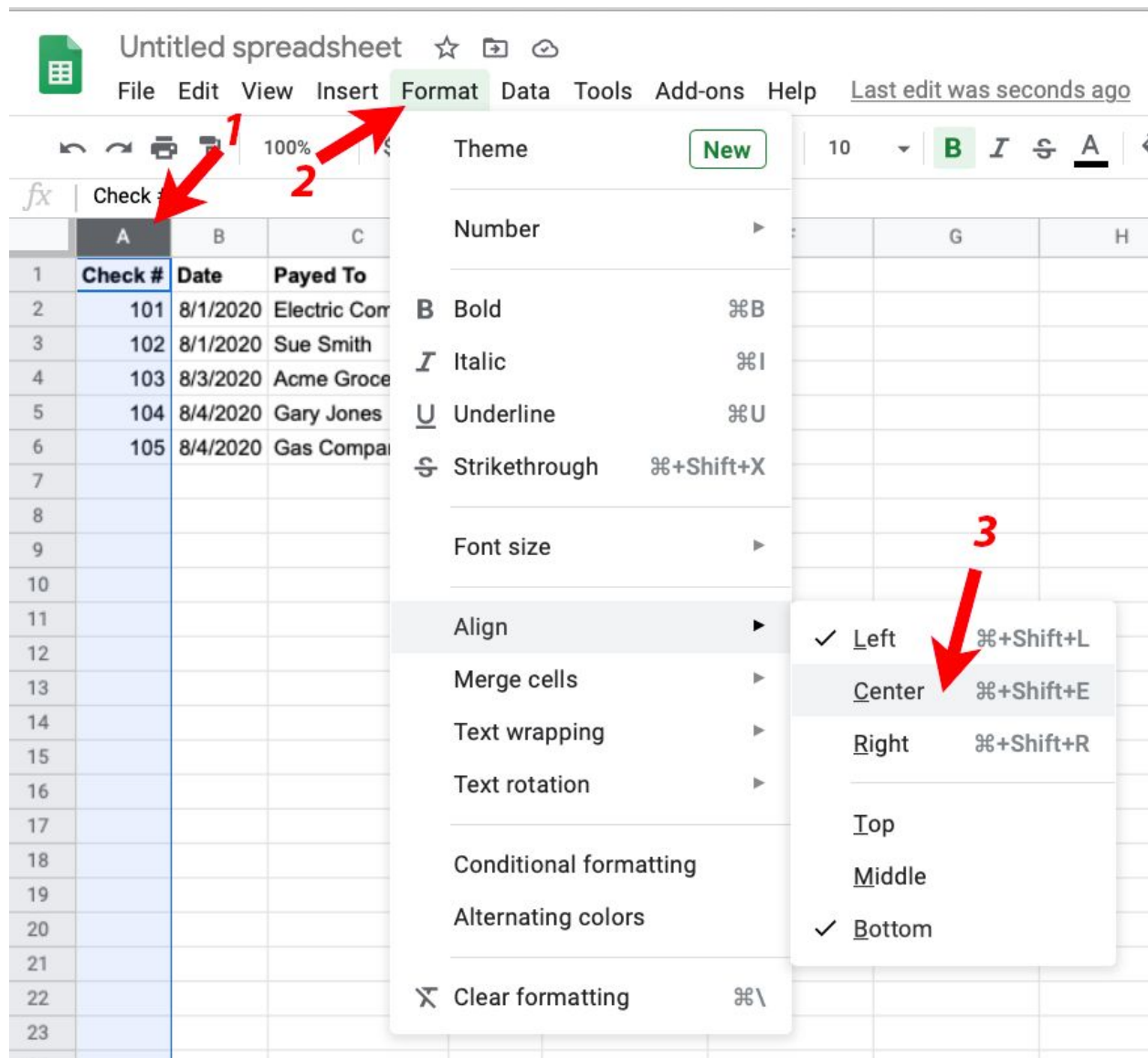
If I do that for all four columns, the spreadsheet looks like this:



The screenshot shows a Google Sheets interface. At the top, there's a title bar with 'Untitled spreadsheet' and icons for star, folder, and cloud. Below it is a menu bar with 'File', 'Edit', 'View', 'Insert', 'Format', 'Data', 'Tools', 'Add-ons', 'Help', and 'Link'. A toolbar contains icons for undo, redo, print, and copy, along with settings for zoom (100%), currency (\$, %, .0, .00), decimal places (123), and a language dropdown (Default (Ar...)). The formula bar shows 'fx |'. The spreadsheet grid has columns A through F and rows 1 through 7. The first four columns are labeled 'Check #', 'Date', 'Paid To', and 'Amount' respectively. The data rows contain check numbers 101 through 105, dates from 8/1/2020 to 8/4/2020, payee names, and amounts.

	A	B	C	D	E	F
1	<b>Check #</b>	<b>Date</b>	<b>Payed To</b>	<b>Amount</b>		
2	101	8/1/2020	Electric Company	105.2		
3	102	8/1/2020	Sue Smith	50		
4	103	8/3/2020	Acme Grocers	153.25		
5	104	8/4/2020	Gary Jones	25		
6	105	8/4/2020	Gas Company	45.78		
7						

I can select Column A and change it to be center aligned:



	A	B	C	D
	Check #	Date	Payed To	Amount
	101	8/1/2020	Electric Company	105.2
	102	8/1/2020	Sue Smith	50
	103	8/3/2020	Acme Grocers	153.25
	104	8/4/2020	Gary Jones	25
	105	8/4/2020	Gas Company	45.78

Finally, I can format column D to be currency by clicking on the column heading:

Amount			
A	B	C	D
Check #	Date	Payed To	Amount
101	8/1/2020	Electric Company	105.2
102	8/1/2020	Sue Smith	50
103	8/3/2020	Acme Grocers	153.25
104	8/4/2020	Gary Jones	25
105	8/4/2020	Gas Company	45.78

The screenshot shows the Google Sheets interface with the 'Format' menu open. A red arrow points to the 'Format' menu, and another red arrow points to the 'Currency' option in the 'Number' submenu. The spreadsheet data is visible in the background, matching the table above.

Untitled spreadsheet ☆ 📁 ☁

File Edit View Insert **Format** Data Tools Add-ons Help [Last edit was 3 minutes ago](#)

100% 10 B I S A

Theme New

Number

- ✓ Automatic
- Plain text
- Number 1,000.12
- Percent 10.12%
- Scientific 1.01E+03
- Accounting \$ (1,000.12)
- Financial (1,000.12)
- Currency \$1,000.12**
- Currency (rounded) \$1,000
- Date 9/26/2008
- Time 3:59:00 PM
- Date time 9/26/2008 15:59:00
- Duration 24:01:00
- #,##0 1,235
- 3:59 PM
- Fri, Sep 26, 2008
- More Formats

B Bold %B

I Italic %I

U Underline %U

Strikethrough %+Shift+X

Font size

Align

Merge cells

Text wrapping

Text rotation

Conditional formatting

Alternating colors

✕ Clear formatting %\

Our spreadsheet now looks like this:

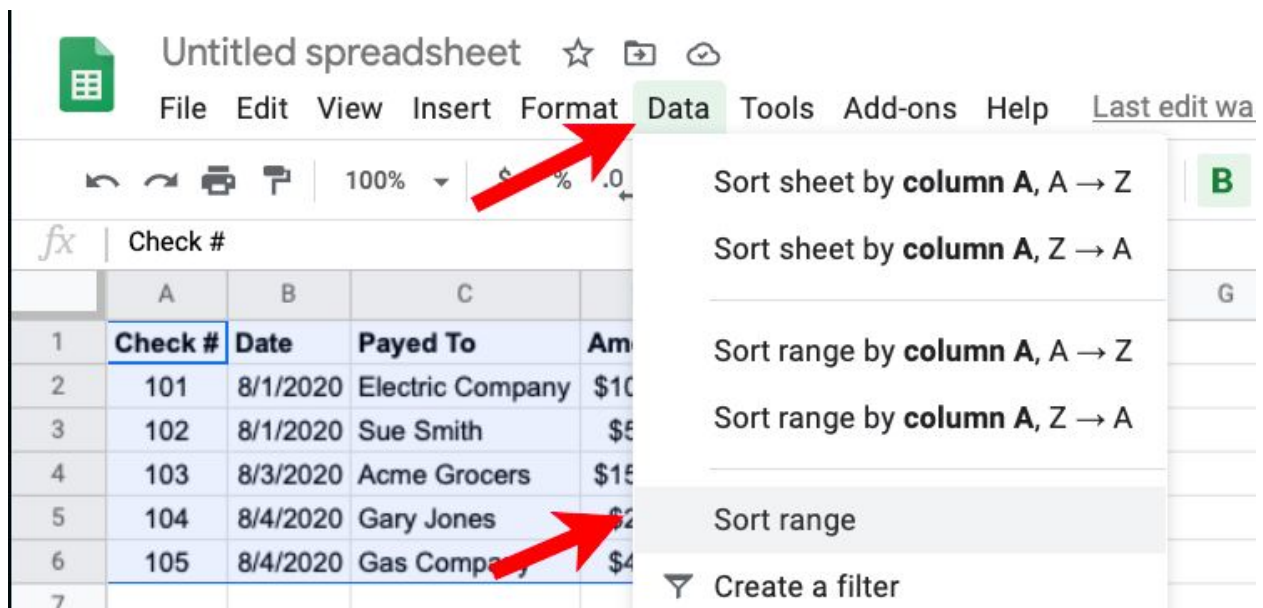
JS |

	A	B	C	D	
1	Check #	Date	Payed To	Amount	
2	101	8/1/2020	Electric Company	\$105.20	
3	102	8/1/2020	Sue Smith	\$50.00	
4	103	8/3/2020	Acme Grocers	\$153.25	
5	104	8/4/2020	Gary Jones	\$25.00	
6	105	8/4/2020	Gas Company	\$45.78	
7					

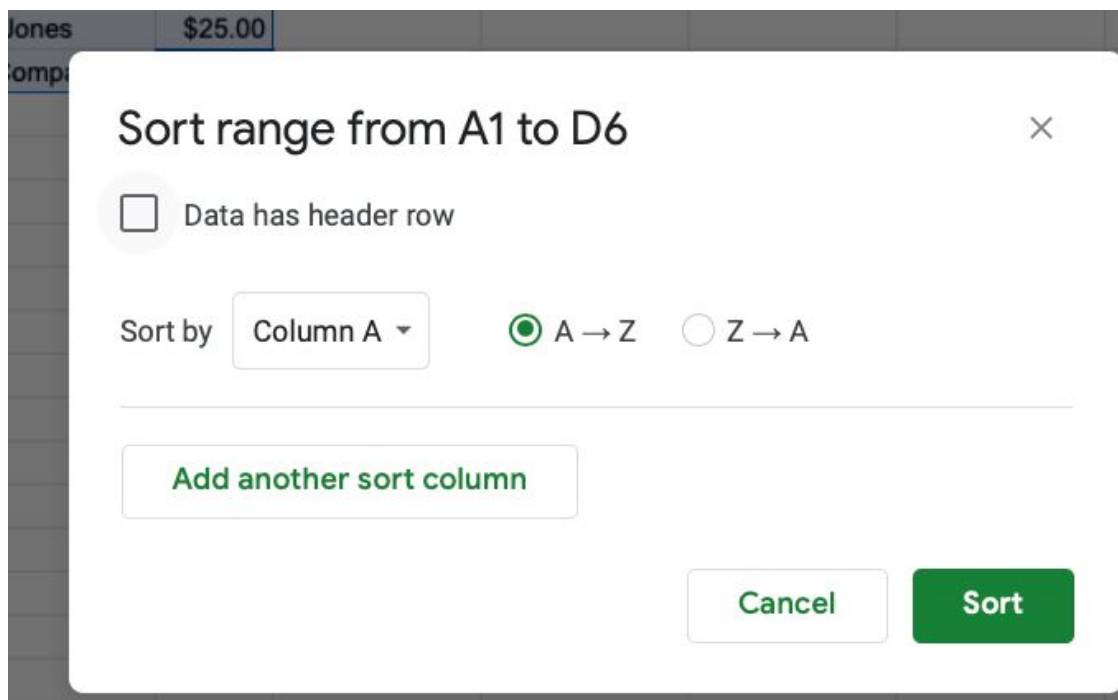
We can sort this by Amount if we like by selecting the cells:

	A	B	C	D	
1	Check #	Date	Payed To	Amount	
2	101	8/1/2020	Electric Company	\$105.20	
3	102	8/1/2020	Sue Smith	\$50.00	
4	103	8/3/2020	Acme Grocers	\$153.25	
5	104	8/4/2020	Gary Jones	\$25.00	
6	105	8/4/2020	Gas Company	\$45.78	
7					

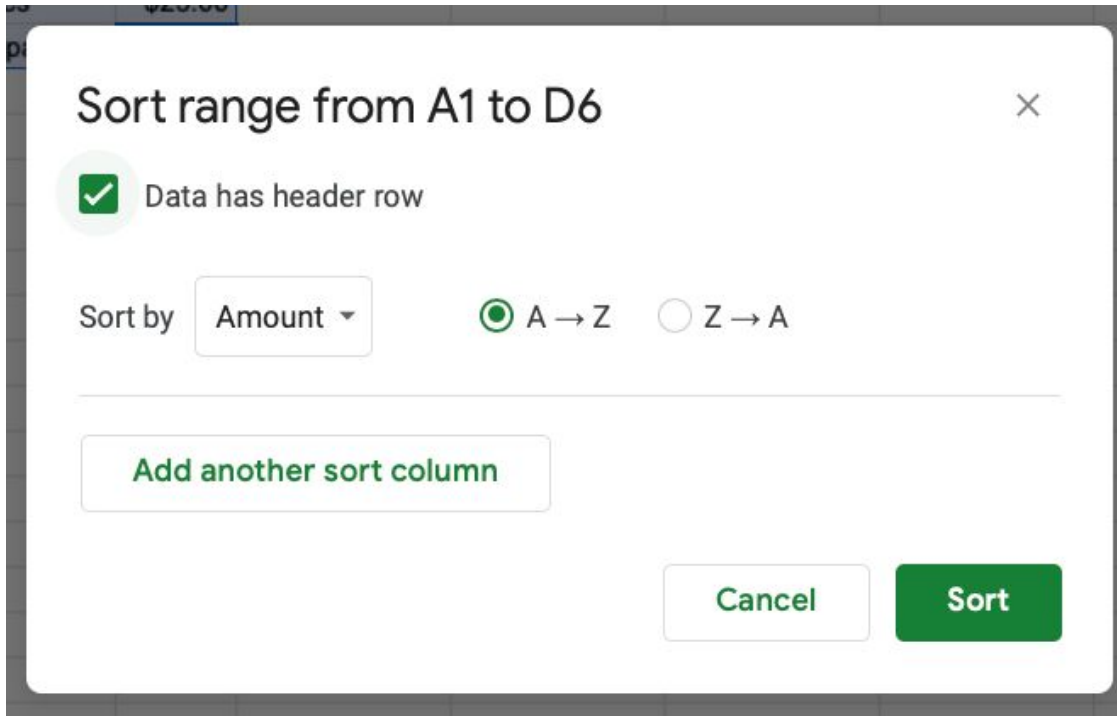
If we choose the Sort Range function on the Data menu:



This window pops up:



We can click the Data has header row checkbox and change use the Sort by menu to select the Amount column (D):



Sort range from A1 to D6

☒ Data has header row

Sort by Amount ▾ ☒ A → Z ☐ Z → A

Add another sort column

Cancel Sort

And click the green Sort button to sort the data:

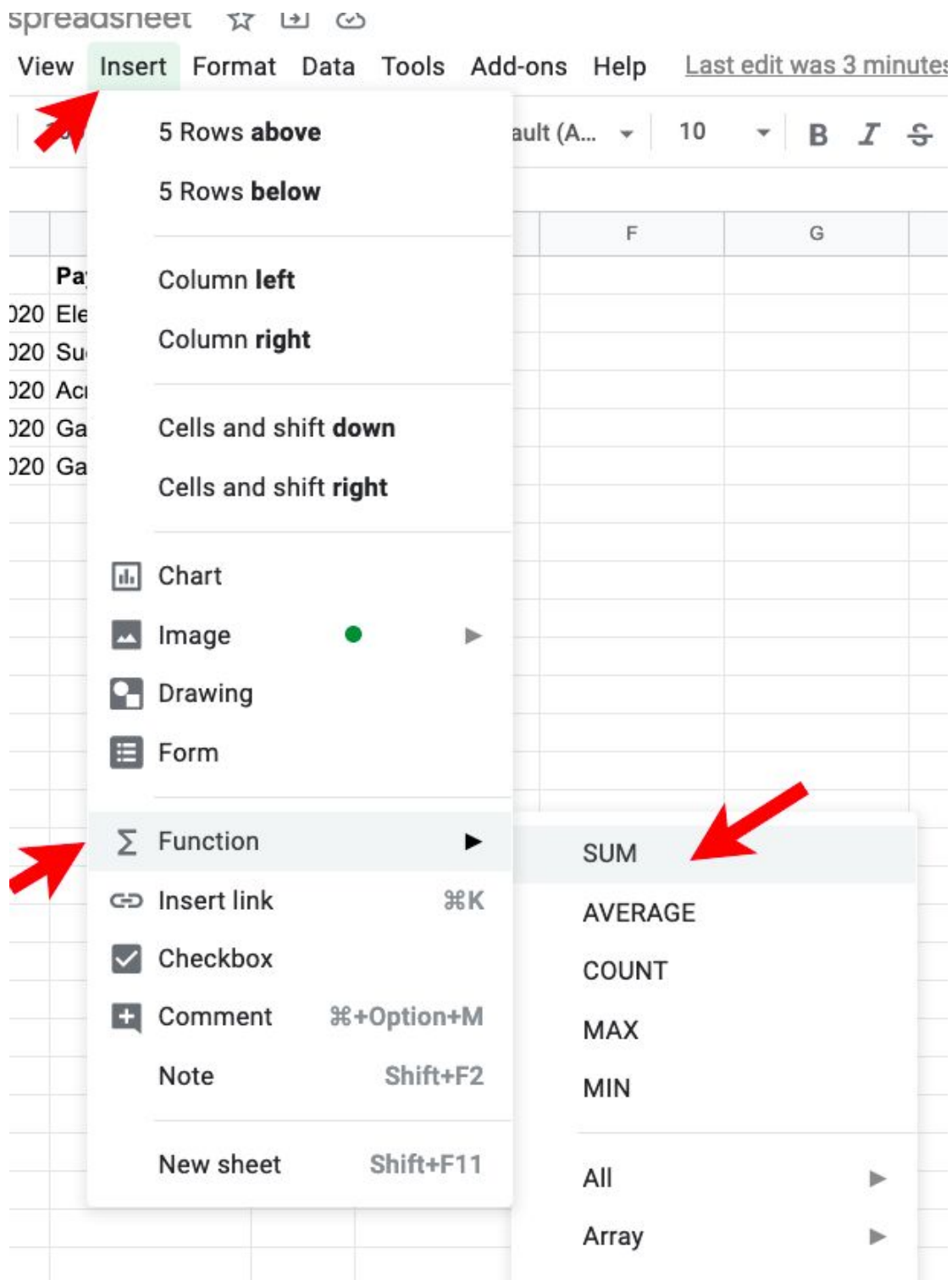
	A	B	C	D
1	<b>Check #</b>	<b>Date</b>	<b>Payed To</b>	<b>Amount</b>
2	104	8/4/2020	Gary Jones	\$25.00
3	105	8/4/2020	Gas Company	\$45.78
4	102	8/1/2020	Sue Smith	\$50.00
5	101	8/1/2020	Electric Company	\$105.20
6	103	8/3/2020	Acme Grocers	\$153.25
7				

We can sort by any column using this technique. You can also add more columns to sort by one and then the other using the “Add another sort column” button

Finally, we can add a new row with the sum of all the amounts. We start by selecting the Amount data cells by dragging from D2 to D6:

<i>fx</i>	105.2				
	A	B	C	D	
1	<b>Check #</b>	<b>Date</b>	<b>Payed To</b>	<b>Amount</b>	
2	101	8/1/2020	Electric Company	\$105.20	
3	102	8/1/2020	Sue Smith	\$50.00	
4	103	8/3/2020	Acme Grocers	\$153.25	
5	104	8/4/2020	Gary Jones	\$25.00	
6	105	8/4/2020	Gas Company	\$45.78	
7					

Then select Insert / Function / SUM menu item:



The spreadsheet now looks like this:

fx		=SUM(D2:D6)			
	A	B	C	D	
1	<b>Check #</b>	<b>Date</b>	<b>Payed To</b>	<b>Amount</b>	
2	101	8/1/2020	Electric Company	\$105.20	
3	102	8/1/2020	Sue Smith	\$50.00	
4	103	8/3/2020	Acme Grocers	\$153.25	
5	104	8/4/2020	Gary Jones	\$25.00	
6	105	8/4/2020	Gas Company	\$45.78	
7				<b>\$379.23</b>	

Hit the Return key to see:


fx					
	A	B	C	D	
1	<b>Check #</b>	<b>Date</b>	<b>Payed To</b>	<b>Amount</b>	
2	101	8/1/2020	Electric Company	\$105.20	
3	102	8/1/2020	Sue Smith	\$50.00	
4	103	8/3/2020	Acme Grocers	\$153.25	
5	104	8/4/2020	Gary Jones	\$25.00	
6	105	8/4/2020	Gas Company	\$45.78	
7				<b>\$379.23</b>	
8					

We can then add a TOTAL title in column C of row 8 and make it bold:

<i>fx</i>	TOTAL				
	A	B	C	D	
1	<b>Check #</b>	<b>Date</b>	<b>Payed To</b>	<b>Amount</b>	
2	101	8/1/2020	Electric Company	\$105.20	
3	102	8/1/2020	Sue Smith	\$50.00	
4	103	8/3/2020	Acme Grocers	\$153.25	
5	104	8/4/2020	Gary Jones	\$25.00	
6	105	8/4/2020	Gas Company	\$45.78	
7			<b>TOTAL</b>	<b>\$379.23</b>	

There are many other functions available in the Insert / Function menu. All functions start with the equals character instead of text or a number, e.g.

**=SUM(D2:D6)**

<i>fx</i>	<b>=SUM(D2:D6)</b> 				
	A	B	C	D	
1	<b>Check #</b>	<b>Date</b>	<b>Payed To</b>	<b>Amount</b>	
2	101	8/1/2020	Electric Company	\$105.20	
3	102	8/1/2020	Sue Smith	\$50.00	
4	103	8/3/2020	Acme Grocers	\$153.25	
5	104	8/4/2020	Gary Jones	\$25.00	
6	105	8/4/2020	Gas Company	\$45.78	
7			<b>TOTAL</b>	<b>\$379.23</b>	

The “D2” refers to column D, row 2 and the D6 is column D row 6. The colon character between them means all cells between D2 and D6.

There are many other features you can use but this should be enough for you to give it a try.