

How to Easily Create a Cumulative Sum Chart in Google Sheets

Authored by
stats writer

November 27, 2025

RECOMMENDED CITATION

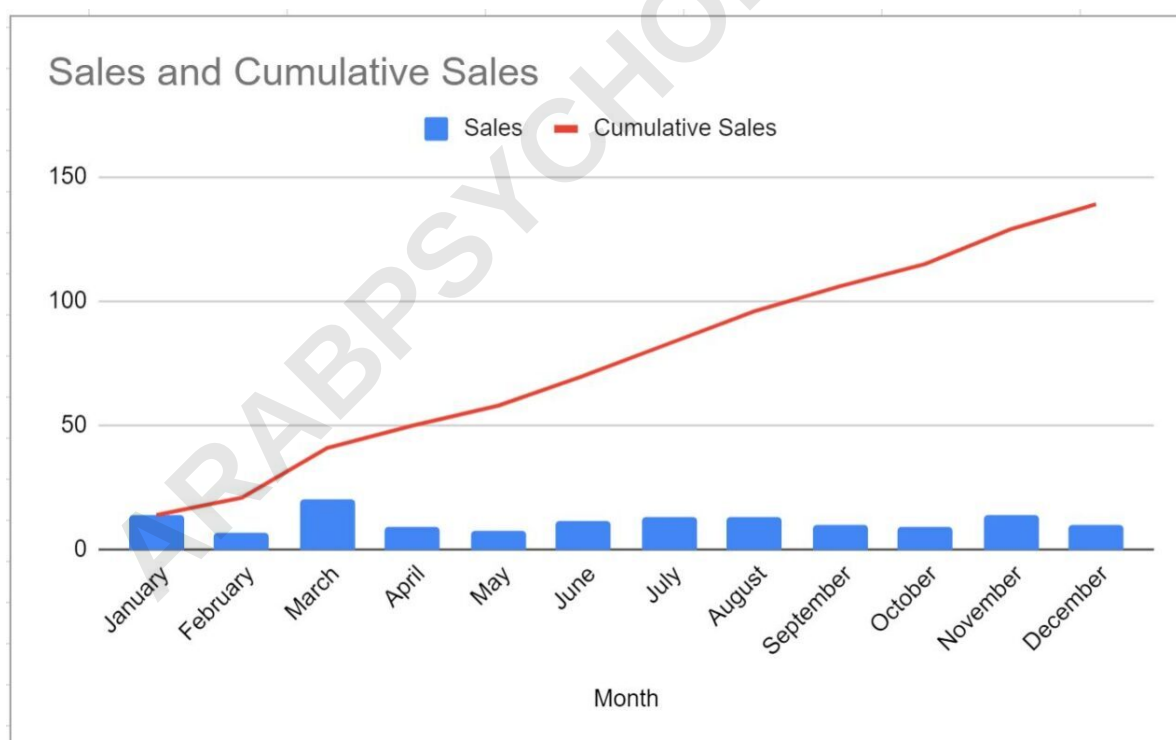
stats writer (2025). *How to Easily Create a Cumulative Sum Chart in Google Sheets*.
PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=100637>

The ability to visualize data trends over time is crucial for effective analysis. A cumulative sum chart, often referred to as a running total graph, is an exceptionally powerful tool for tracking performance progression. This type of visualization allows stakeholders to understand not only the individual performance metrics for discrete periods but also the total impact of those metrics combined up to any given point.

This guide provides a comprehensive, step-by-step methodology for generating a dynamic cumulative sum chart within Google Sheets. While the initial setup might seem technical, the process is streamlined: it primarily involves preparing your dataset, implementing a simple running total formula, and configuring the visualization settings using the built-in chart editor.

By the end of this tutorial, you will be able to transform raw sales figures, budget expenditures, or other time-series data into a clear, compelling visual story that highlights overall growth or decline trajectories.

This tutorial provides a step-by-step example of how to create the following cumulative sum chart in Google Sheets:



Let's jump in!

Understanding the Need for a Cumulative Sum Chart

Before diving into the mechanics of chart creation, it is essential to understand the primary utility of a cumulative sum visualization. Unlike a standard column chart which shows performance in isolation for distinct periods (e.g., monthly sales), the cumulative view integrates the performance across all previous periods. This provides a running total, which is particularly useful for budget tracking, sales target attainment, and project milestone monitoring.

When analyzing financial data, for instance, a large spike in one month's sales might look impressive on a standard bar chart, but a cumulative chart instantly reveals how that spike contributed to the overall yearly goal. If the running total line remains flat or decreases, it signals a deeper underlying issue regarding meeting long-term objectives, regardless of short-term success. This context makes the cumulative sum a cornerstone of financial reporting and performance management.

Step 1: Setting Up the Dataset in Google Sheets

The foundation of any robust visualization is a well-structured dataset. For this example, we will structure our sheet to track monthly sales over the course of a year. It is critical that your data is organized chronologically, as the cumulative calculation depends entirely on the sequential order of entries. Your sheet should include at least two columns: one for the time dimension (e.g., Month) and one for the metric you wish to track (e.g., Sales).

For optimal chart generation, ensure your data begins in row 1 with appropriate headers. We will establish the following schema: Column A for the Month label and Column B for the corresponding Sales figures. Keeping the raw data separate from the calculated fields (like the running total) maintains data integrity and makes auditing the sheet much easier later on. Consistency in formatting, particularly numerical formatting for the sales column, is also highly recommended at this stage.

First, let's create the following dataset that shows the total sales of some item during each month in a year:

	A	B	C	D
1	Month	Sales		
2	January	14		
3	February	7		
4	March	20		
5	April	9		
6	May	8		
7	June	12		
8	July	13		
9	August	13		
10	September	10		
11	October	9		
12	November	14		
13	December	10		
14				
15				
16				
17				
18				
19				

Step 2: Calculating the Cumulative Sum using the SUM Formula

With the core data entered, the next crucial step is calculating the running total. This is achieved through a dynamic application of the standard SUM formula in Google Sheets, utilizing absolute and relative cell references simultaneously. The goal is to create a range that starts at a fixed point (the beginning of the data) and expands dynamically as the formula is dragged down the column.

We will dedicate Column C to the Cumulative Sum. The formula is structured to lock the starting cell (using dollar signs, `$B$2`) while allowing the end cell (B2) to adjust relative to its position in the column. Next, we'll use the following formula to calculate the cumulative sum of sales:

`=SUM($B$2:B2)`

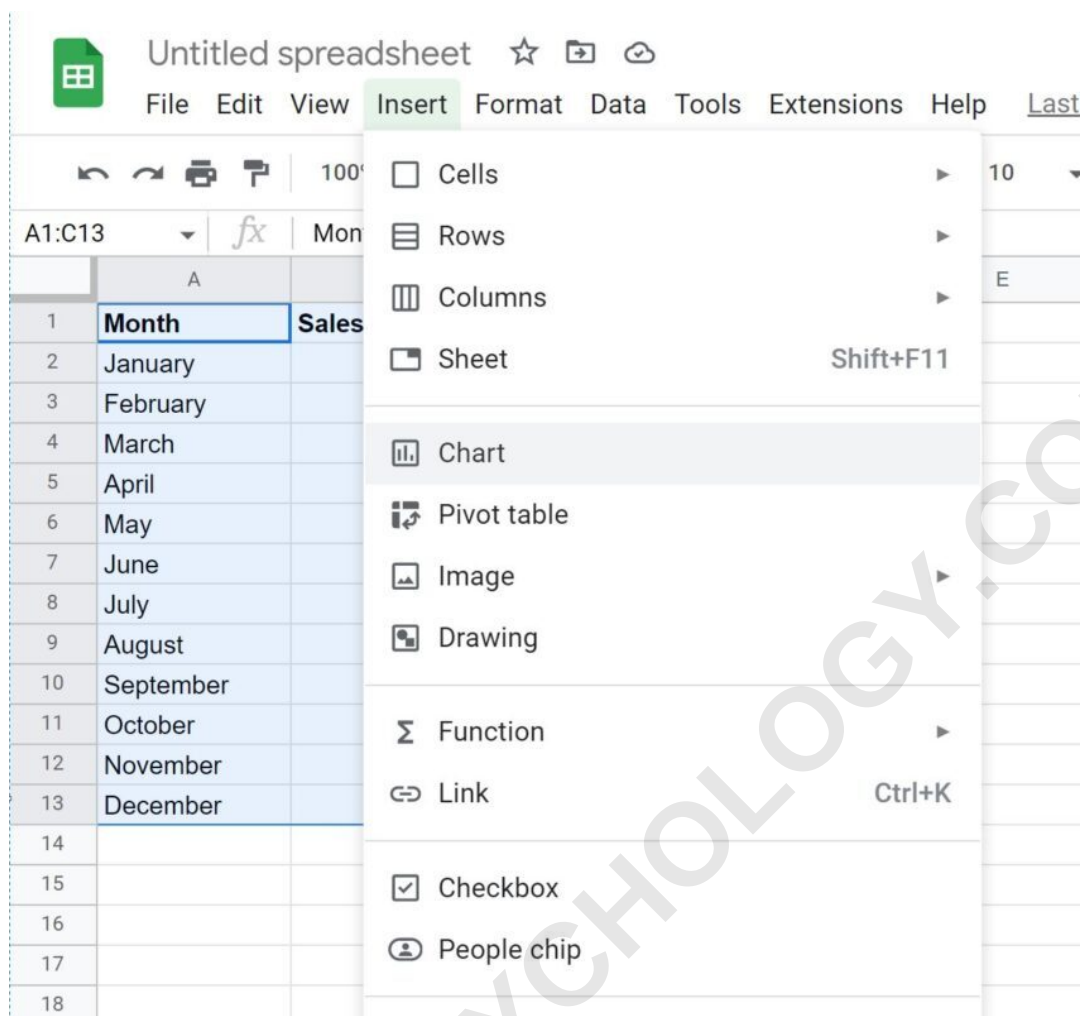
This specific formula ensures that when it is applied to cell C3, the range automatically adjusts to **`=SUM($B$2:B3)`**, thereby including the B3 value in the running total. Similarly, applying it to C13 will result in **`=SUM($B$2:B13)`**, providing the final total sales for the entire period. We can type this formula into cell **C2** and then drag and fill it to every remaining cell in column C:

C2			=SUM(\$B\$2:B2)	
	A	B	C	D 
1	Month	Sales	Cumulative Sales	
2	January	14	14	
3	February	7	21	
4	March	20	41	
5	April	9	50	
6	May	8	58	
7	June	12	70	
8	July	13	83	
9	August	13	96	
10	September	10	106	
11	October	9	115	
12	November	14	129	
13	December	10	139	
14				
15				
16				
17				
18				
19				

Step 3: Initiating the Chart Creation Process

Once the raw data and the calculated running totals are prepared, we can proceed to the visualization phase. The key to creating an effective combined chart is ensuring that the entire relevant data range is selected before inserting the chart. This selection should include the time dimension, the raw metric, and the cumulative metric columns, including their headers. This comprehensive selection helps Google Sheets automatically suggest the most appropriate chart type.

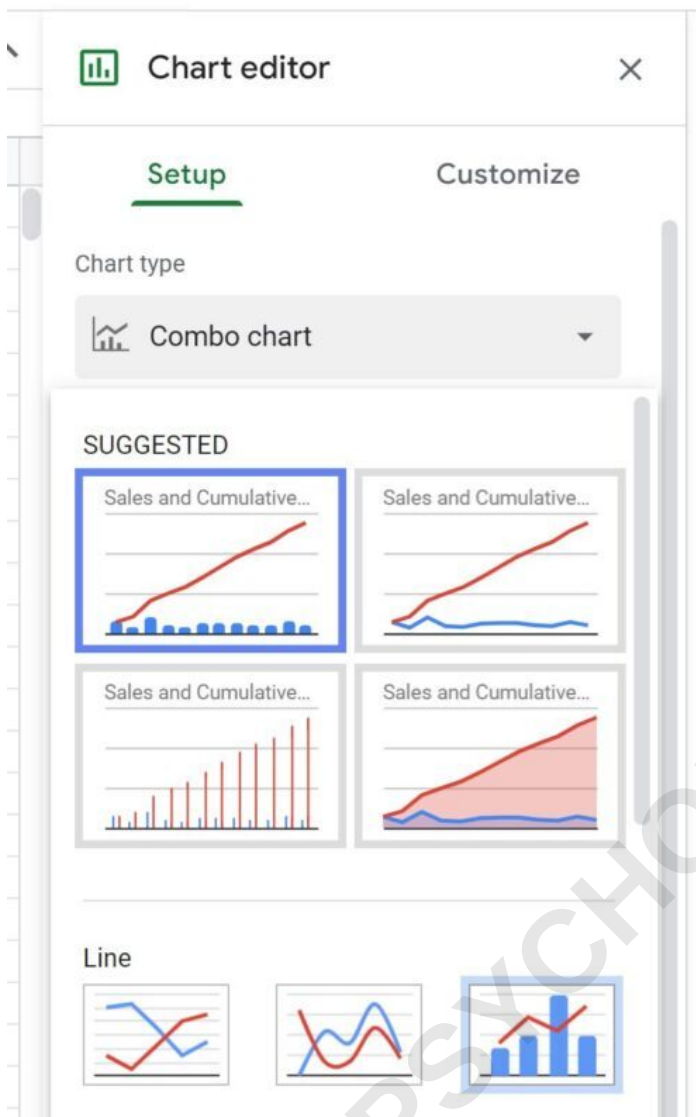
To initiate the process, highlight the cell range **A1:C13**, ensuring that all 12 data rows plus the header row are encompassed. After selection, navigate to the top ribbon menu. Click the **Insert** tab, and subsequently select **Chart**. This action opens the powerful Chart editor panel on the right side of your screen, presenting the initial, often default, visualization.



Step 4: Configuring the Chart Type to Combo Chart

The initial chart generated by Google Sheets might default to a simple bar chart. While useful, this type often fails to clearly distinguish between the monthly metric (Sales) and the cumulative sum. The most effective visualization for this data structure is the Combo chart, which allows the use of two distinct series representations--typically bars for discrete data and a line for cumulative progression.

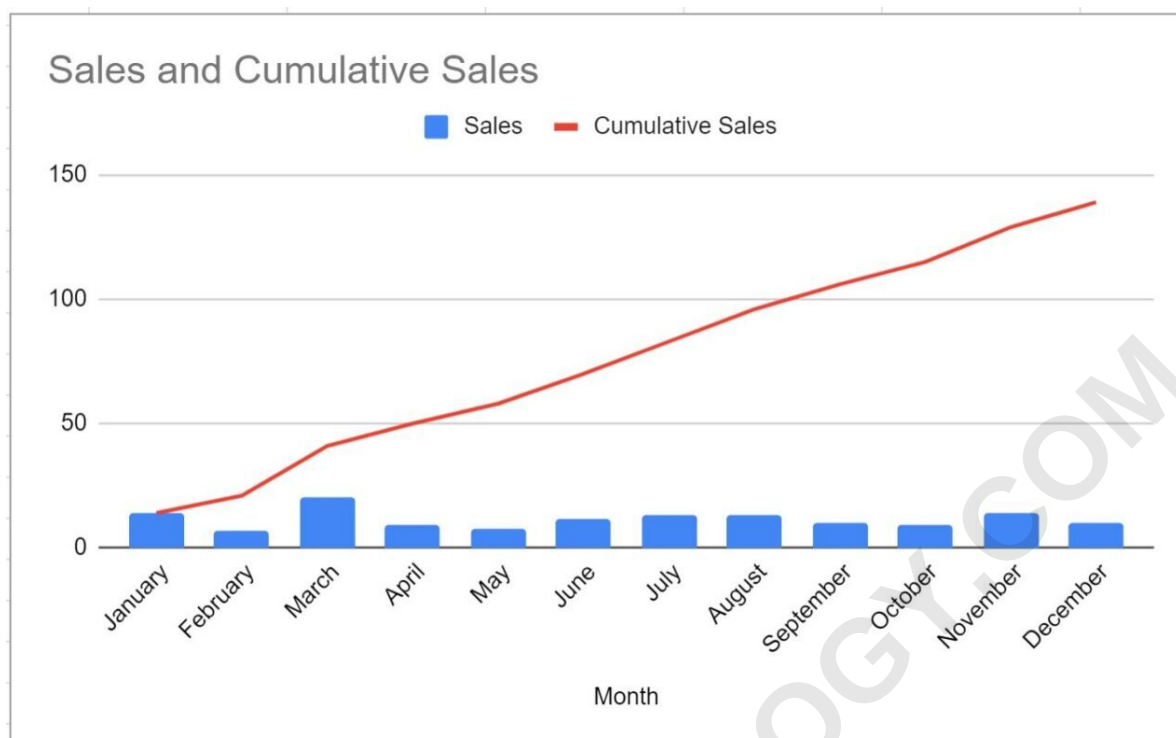
In the **Chart editor** panel, click the **Setup** tab if you are not already there. Under the "Chart type" dropdown menu, choose the visualization titled **Combo chart**. The Combo chart is ideal because it allows the monthly sales to be displayed as columns, providing an easy comparison of period-to-period performance, while the running total is overlaid as a smooth line, clearly demonstrating the accumulated growth over the year.



Interpreting the Combined Visualization

Upon selecting the Combo chart, the following integrated chart will automatically appear in your spreadsheet. This visualization provides immediate insights that neither a standard bar chart nor a standalone line chart could offer. The effectiveness lies in the juxtaposition of the monthly performance against the overall trajectory, allowing for rapid assessment of growth momentum.

The chart features two distinct visual elements, each representing a crucial data series: The blue bars represent the sales achieved during each individual month, clearly showing performance peaks and troughs. Conversely, the prominent red line represents the cumulative sales, which should always trend upward, demonstrating the total aggregation of sales up to that specific month. The slope of the line is particularly informative; a steep slope indicates a period of high performance, while a flattening curve suggests slower growth.



Customization and Best Practices for Polish

While the basic combo chart is functional, fine-tuning its aesthetic elements ensures maximum clarity and professionalism. The Chart editor panel offers extensive customization options under the "Customize" tab. Key areas for refinement include adjusting the chart title for better clarity, customizing the colors of the bars and line to align with branding guidelines or color accessibility standards, and refining the appearance of the line style, perhaps making it thicker or dashed for emphasis.

Furthermore, consider adding relevant axis titles to clarify the units being measured (e.g., "Sales Revenue in USD"). If the scale of the cumulative line makes the monthly bars difficult to read, you may also consider moving the cumulative series to a secondary axis using the customization settings. This ensures both data series are optimally visualized. Feel free to customize the title, customize the colors, customize the line style, and adjust the width of the bars to make the plot look however you'd like.

Conclusion: Leveraging the Cumulative Sum Chart

The creation of a dynamic cumulative sum chart in Google Sheets is a fundamental skill for advanced data analysis. By combining the discrete performance of monthly data with the expansive view of the running total, analysts gain a powerful perspective on long-term trends and goal attainment. This visualization is essential for executive reporting and operational review,

providing the immediate context needed for strategic decision-making.

Mastering the use of absolute references in your formula, coupled with the configuration of the integrated Combo chart type, ensures that your data presentations are both accurate and visually compelling. Always remember that the quality of the chart relies heavily on the structured nature of the initial dataset and the flawless implementation of the running total calculation.

ARABPSYCHOLOGY.COM