

# How to Easily Multiply an Entire Column by a Constant in Google Sheets

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One of the most frequent tasks in data analysis within [Google Sheets](#) is performing bulk operations, such as scaling an entire column of numerical values. While spreadsheet applications sometimes offer specific menu options for simple calculations, the most reliable, flexible, and transferable method involves leveraging fundamental arithmetic [formulas](#). This guide provides an expert walkthrough on how to efficiently multiply a column of data by a fixed numerical value, commonly referred to as a [constant](#).

Understanding this basic technique is foundational to mastering spreadsheet automation. Unlike manual calculations, using a [formula](#) allows for dynamic updates; if the source data changes, the resulting column updates automatically. We will focus specifically on the direct [cell](#) reference method, which is the easiest way for beginners to apply array-like operations across numerous rows using the simple drag functionality of [Google Sheets](#).

## The Foundational [Formula](#) for [Multiplication](#)

To multiply a column of values by a single fixed number, we utilize the arithmetic [formula](#) structure common to all spreadsheet software. This method involves referencing the specific [cell](#) containing the value to be manipulated and using the asterisk (\*) symbol as the operator for [multiplication](#). The formula must always start with an equals sign (=).

The core concept is to define the relationship between the input [cell](#) and the designated [constant](#). By establishing this relationship in the first row of your resulting column, you create a template calculation that can be quickly replicated down the entire dataset.

You can use the following basic formula structure to multiply a column value by a [constant](#) in [Google Sheets](#):

**=CELL\*CONSTANT**

For example, if you wish to multiply the numerical value housed within **Cell A1** by the fixed number **5**, the formula is structured simply and directly:

**=A1\*5**

This [formula](#) is entered into the first row of your output column (e.g., **B1**). Once established, the power of spreadsheets lies in their ability to automatically adjust cell references when this formula is copied or dragged down, which is essential for processing hundreds or thousands of rows efficiently.

## Initial Setup: Referencing the First Value

Before applying the calculation to the entire column, you must successfully execute the operation for the very first data point. This confirms the syntax is correct and prepares the formula for automatic replication.

Assume your original data starts in row 2 of Column A (e.g., **A2**) and you want the results to appear in Column B, starting at **B2**. The key is to specifically reference **A2** and apply the desired multiplier, which in this demonstration, we will set as 5.

## Example: Multiply Column by a Constant in Google Sheets

Suppose we have the following initial list of values in Column A of our Google Sheets document, representing our raw dataset:

	A	B	C	D
1	<b>Original Values</b>			
2	10			
3	15			
4	18			
5	20			
6	25			
7	50			
8	100			
9	200			
10	400			
11	1000			
12	2000			
13				
14				
15				
16				
17				

To begin the transformation, we navigate to **Cell B2**, which is adjacent to the first data point (**A2**). We enter the formula that instructs Google Sheets to take the value from **A2** and perform the multiplication by our chosen constant (5).

**=A2\*5**

Upon pressing Enter, **B2** will display the result of the calculation ( $10 * 5 = 50$ ). This initial step confirms the formula is functioning correctly, as shown in the updated spreadsheet view below:

	A	B	C	D
1	<b>Original Values</b>	<b>Original Value * 5</b>		
2	10	50		
3	15			
4	18			
5	20			
6	25			
7	50			
8	100			
9	200			
10	400			
11	1000			
12	2000			
13				
14				
15				

## Replicating the Formula Using the Fill Handle

Once the initial calculation is successful, the next critical step is to apply this operation across the entire data range without manually typing the formula for every row. Google Sheets uses a powerful feature known as the **Fill Handle** to achieve this replication efficiently.

The **Fill Handle** is a small square that appears at the bottom right-hand corner of the active cell. When you hover your cursor over this square, the cursor changes into a tiny plus sign (+). This visual cue indicates that the drag-and-drop functionality is active.

To replicate the calculation, click and hold the mouse button while the plus sign is displayed, and drag the mouse downwards across all the rows corresponding to your original data in Column A. As you drag, Google Sheets automatically adjusts the row reference in the formula (e.g., changing **=A2\*5** to **=A3\*5**, then **=A4\*5**, and so on). This is called **Relative Referencing** and is fundamental to spreadsheet efficiency.

Next, we can hover over the bottom right-hand corner of **cell B2** until a tiny "+" appears. Then click

and drag down to all of the remaining cells in column B:

	A	B	C	D
1	<b>Original Values</b>	<b>Original Value * 5</b>		
2	10	50		
3	15	75		
4	18	90		
5	20	100		
6	25	125		
7	50	250		
8	100	500		
9	200	1000		
10	400	2000		
11	1000	5000		
12	2000	10000		
13				
14				
15				

## Verifying the Results and Understanding the Multiplication Principle

After successfully dragging the formula down the column, Column B will now contain the result of the multiplication of every corresponding value in Column A by the **constant 5**. This confirms that the scaling operation has been performed correctly across the entire dataset. This method ensures accuracy and speed, eliminating the errors associated with manual calculation.

All of the values in column B are equal to 5 times the values in column A. We can manually verify a few of these results to confirm the accuracy of the spreadsheet operation:

$10 * 5 = \mathbf{50}$ . (Derived from A2)

$15 * 5 = \mathbf{75}$ . (Derived from A3)

$18 * 5 = \mathbf{90}$ . (Derived from A4)

$20 * 5 = \mathbf{100}$ . (Derived from A5)

$25 * 5 = \mathbf{125}$ . (Derived from A6)

## Flexibility in Constant Value Adjustment

A significant advantage of using a formula-based approach is the ease with which you can modify

the constant. If your business requirements or analytical needs change--for instance, if you decide to scale the values by 9 instead of 5--you do not need to rewrite or manually adjust every calculation.

To multiply by a different constant, simply change the value used in the first cell of the output column, which is **B2** in our example. Because all subsequent cells in Column B reference the formula established in **B2** through relative referencing, updating **B2** and dragging the formula down again instantly updates the entire resulting column.

For example, to multiply by 9 simply use the following revised formula in **B2**:

**=A2\*9**

Then, ensure you click and drag this updated formula down to all of the remaining cells in column B to apply the new multiplier across the entire dataset.

### Advanced Method: Using Absolute References for Constants

While directly typing the constant (e.g., \*5) works well for simple operations, a more robust method involves storing the constant in its own dedicated cell and using an **Absolute Reference**. This approach significantly improves auditability and simplifies large-scale modifications.

**Store the Constant:** Enter the constant (e.g., 9) into a spare cell, such as **C1**.

**Create the Formula:** In the first output cell (**B2**), enter the formula: **=A2\*\$C\$1**.

**Use Absolute Reference:** The dollar signs (\$) before the column letter and row number (i.e., **\$C\$1**) lock that reference. This means that when you drag the formula down, the reference to **A2** changes to **A3**, **A4**, etc. (Relative Reference), but the reference to the constant **\$C\$1** remains fixed (Absolute Reference).

This powerful technique allows you to change the multiplier just once in cell **C1**, and all calculated values in Column B will update instantly, without needing to drag the formula down again. This is considered best practice for any complex or long-term spreadsheet modeling in Google Sheets.

### Alternative: Using ARRAYFORMULA for Dynamic Column Multiplication

For expert users dealing with large datasets, the **ARRAYFORMULA** function offers the highest level of efficiency, as it applies the operation to an entire range using a single formula input, eliminating the need for dragging the fill handle entirely. This formula is entered only once in the header cell of the output column (e.g., **B1** or **B2**, depending on whether you include headers).

The structure is as follows:

**=ARRAYFORMULA(A2:A100\*5)**

Where **A2:A100** represents the range of cells you wish to multiply. This single formula instantaneously populates the corresponding cells in Column B. If any data is added to the specified range in Column A, the results in Column B automatically expand and update, making this a highly dynamic and powerful method for managing calculations in Google Sheets.

How to Multiply Column by a Percentage in Google Sheets

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