

Combine Date & Time in Google Sheets

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Introduction: Mastering Date and Time Combination in Google Sheets

Managing and manipulating temporal data is a fundamental requirement in data analysis and reporting. In Google Sheets, dates and times are frequently stored in separate columns, a configuration that can complicate complex calculations or standardized reporting. Fortunately, expert users have access to reliable techniques for combining date values and time values from two distinct cells into a single, unified cell representing a complete timestamp. This article details the two primary techniques--simple arithmetic addition and advanced formatting using dedicated functions--allowing you to handle temporal data efficiently and accurately.

Understanding how Google Sheets interprets time is crucial to successful combination. Unlike simple text strings, dates and times are internally represented as numerical values, commonly referred to as serial numbers. The integer part of this serial number denotes the date (counting days since December 30, 1899), while the fractional part represents the time (the proportion of the 24-hour day that has elapsed). Leveraging this native numerical structure allows us to utilize basic arithmetic operations for instantaneous combination.

We will explore two robust formulas suitable for merging these data types. For consistency across all examples presented, we will assume that the date value is stored in cell **A2** and the corresponding time value is in cell **B2**.

Method 1: Combining Date and Time Using Basic Addition

The most straightforward and computationally efficient way to merge a date and time in Google Sheets is by utilizing the simple addition operator (+). Since both dates and times are fundamentally stored as numerical serial numbers, adding the date serial number to the time serial number seamlessly results in a new single serial number that accurately represents the combined datetime point.

This method is highly favored in scenarios where computational speed and subsequent calculations are prioritized over immediate display formatting. The resulting numerical value preserves the integrity of both the date and time components, which is essential for accurate temporal calculations such as calculating elapsed time or sequencing events.

The formula required for this technique is minimal and highly intuitive:

=A2+B2

A key consideration for this method is that the formatting of the resulting cell (e.g., C2) may default to a standard date, a time format, or even the raw underlying serial number. To ensure proper visual representation of the combined timestamp, you will typically need to manually apply a

custom date and time format (via Format > Number > Date time) after the formula has been successfully executed.

Example 1: Practical Implementation of the Addition Method

Imagine a working dataset where column A logs the calendar date of an occurrence and column B records the precise time of that event. Our objective is to generate a unified, precise timestamp in column C for streamlined analysis.

We begin by entering the simple addition formula directly into the first cell of our results column, **C2**. This formula references the date input in **A2** and the time input in **B2**:

=A2+B2

Following the initial formula entry, we can efficiently apply this calculation to the entire dataset. This is achieved by utilizing the fill handle (the small square located at the bottom right corner of cell C2) and dragging it down the column. This action copies the relative formula down, processing all corresponding rows simultaneously.

	A	B	C
1	Date	Time	
2	1/3/2023	6:17 AM	
3	1/15/2023	3:23 PM	
4	2/23/2023	9:15 PM	
5	3/14/2023	11:59 AM	
6	3/25/2023	4:15 AM	
7	4/1/2023	10:45 PM	
8	5/16/2023	4:37 AM	
9	5/17/2023	5:18 AM	
10			
11			
12			
13			

Upon completion, column C will display the combined date and time for each respective row. A crucial formatting observation is that Google Sheets often defaults to displaying time using a 24-hour clock format. If your reporting standards necessitate 12-hour notation with AM or PM designators, you must proceed with custom formatting adjustments within the Number menu.

C2 ∇ fx =A2+B2

	A	B	C	D
1	Date	Time	Date & Time	
2	1/3/2023	6:17 AM	1/3/2023 6:17:00	
3	1/15/2023	3:23 PM	1/15/2023 15:23:00	
4	2/23/2023	9:15 PM	2/23/2023 21:15:00	
5	3/14/2023	11:59 AM	3/14/2023 11:59:00	
6	3/25/2023	4:15 AM	3/25/2023 4:15:00	
7	4/1/2023	10:45 PM	4/1/2023 22:45:00	
8	5/16/2023	4:37 AM	5/16/2023 4:37:00	
9	5/17/2023	5:18 AM	5/17/2023 5:18:00	
10				
11				
12				
13				

Method 2: Achieving Precise Formatting with CONCATENATE and TEXT Functions

While the addition method is fast and mathematically sound, it lacks immediate control over visual formatting. For situations requiring stringent display standards, combining the CONCATENATE function (or the equivalent ampersand operator, &) with the powerful TEXT function is the superior solution. This technique operates by first converting the numerical date and time values into highly customized, readable text strings, which are then joined together.

The substantial benefit of employing the **TEXT** function is its capability to specify the exact output format using standard format codes. This inherent flexibility removes the uncertainty associated with default formatting and provides explicit control over details like the order of month and day, the inclusion of a full or abbreviated year, and the choice between 12-hour (AM/PM) or 24-hour time representation.

The formula constructs the final output by applying **TEXT** separately to the date cell (A2) and the time cell (B2), and then using **CONCATENATE** to join these formatted strings, usually inserting a space character (" ") for improved readability:

=CONCATENATE(TEXT(A2,"m/d/yyyy")," ",TEXT(B2,"h:mm AM/PM"))

It is imperative to note a limitation of this method: the output is a literal **text string**, not a numerical serial number. While this is perfect for visual display and reporting, it means the resulting value cannot be directly used in subsequent mathematical date or time calculations, unlike the true numerical output produced by Method 1.

Example 2: Implementation of CONCATENATE and TEXT for Formatted Output

To demonstrate the precision gained from formatting control, we apply the **CONCATENATE** and **TEXT** formula to our sample data. This technique guarantees that the output in column C instantly meets predefined display standards, such as Month/Day/Year ordering and explicit 12-hour time notation.

We input the comprehensive formula into cell **C2**, carefully defining the format strings. In this specific example, we use "m/d/yyyy" for the date portion and "h:mm AM/PM" for the time portion. This combination ensures the resulting output is immediately user-friendly and accurately structured according to common reporting requirements.

The format strings dictate the visual output:

"m/d/yyyy": Ensures the month, day, and a four-digit year are displayed in order, separated by slashes.

"h:mm AM/PM": Forces the time to conform to the 12-hour standard, explicitly appending the AM or PM designator.

After confirming the formula, we use the drag-and-fill functionality to apply the customized formatting across all remaining rows in column C.

=CONCATENATE(TEXT(A2,"m/d/yyyy")," ",TEXT(B2,"h:mm AM/PM"))

As the subsequent image illustrates, Column C now displays the combined date and time for every entry, perfectly adhering to the specified text formatting criteria. We explicitly noted the format specifications used: **m/d/yyyy** for the date and **h:mm AM/PM** for the time.

C2 fx =CONCATENATE(TEXT(A2,"m/d/yyyy")," ",TEXT(B2,"h:mm AM/PM"))

	A	B	C	D	E
1	Date	Time	Date & Time		
2	1/3/2023	6:17 AM	1/3/2023 6:17 AM		
3	1/15/2023	3:23 PM	1/15/2023 3:23 PM		
4	2/23/2023	9:15 PM	2/23/2023 9:15 PM		
5	3/14/2023	11:59 AM	3/14/2023 11:59 AM		
6	3/25/2023	4:15 AM	3/25/2023 4:15 AM		
7	4/1/2023	10:45 PM	4/1/2023 10:45 PM		
8	5/16/2023	4:37 AM	5/16/2023 4:37 AM		
9	5/17/2023	5:18 AM	5/17/2023 5:18 AM		
10					
11					
12					
13					
14					

Advanced Formatting Considerations for Date and Time Display

When working with the TEXT function, a detailed understanding of the available format codes is vital for maximum customization. These codes allow you to tailor the output far beyond the standard numerical representations used in Method 1.

For example, if you require the full textual name of the day of the week, you would use "dddd". For the full name of the month, the code "mmmm" is used. Similarly, granular control over time includes using "hh" to display hours with a leading zero (01-12) or using "H" or "HH" to enforce 24-hour time representation regardless of the AM/PM setting.

Common Date Format Codes:

m or mm: Represents the month (1-12 or 01-12).

d or dd: Represents the day of the month (1-31 or 01-31).

yyyy: Ensures a four-digit year display.

ddd: Provides the abbreviated day name (e.g., Fri).

Common Time Format Codes:

h or hh: Represents the hour in 12-hour format (1-12 or 01-12).

H or HH: Represents the hour in 24-hour format (0-23 or 00-23).

mm: Represents the minutes (00-59).

ss: Represents the seconds (00-59).

AM/PM or **am/pm:** Displays the relevant meridian designator.

By mastering these specific format codes, you can ensure that the resulting text output perfectly aligns with any required organizational or reporting standards for your combined datetime string. This formatting capability constitutes the core competitive advantage of Method 2.

Troubleshooting Common Combination Issues

While combining dates and times in Google Sheets is generally simple, users occasionally encounter errors related to data types and inconsistent formatting. Addressing these issues ensures data integrity and operational success.

Raw Serial Number Display (Method 1): If you execute the addition method and the target cell displays a large numerical value (e.g., 45210.5), it signifies that the cell has retained generic number formatting, showing the underlying raw serial number. To correct this, select the result column, navigate to Format > Number, and select a predefined **Date time** format or define a **Custom date and time** format that suits your display requirements.

Input Data Type Errors: It is essential to verify that the source cells (A2 and B2) are definitively recognized by the spreadsheet software as valid date and time values, respectively. If the input data is inadvertently stored as a text string (often evidenced by left alignment), the addition formula (Method 1) will fail, resulting in a #VALUE! error. If text conversion is necessary, use the built-in **DATEVALUE** or **TIMEVALUE** functions to convert the text-based dates/times into their numerical serial equivalents prior to attempting combination.

Incompatibility with Calculations (Method 2): As previously established, Method 2 (using **CONCATENATE** and **TEXT**) generates a text string output. If your project requires subsequent numerical operations, such as calculating the time difference between the combined column and another timestamp, you absolutely must use Method 1. The text output from Method 2 serves a purely visual and presentation-based purpose.

For the most comprehensive and up-to-date documentation regarding the **TEXT** function, including an exhaustive listing of all supported format patterns and their regional variations, users are encouraged to consult the complete [Google Sheets documentation](#).

Summary Comparison of Combination Methods

The ultimate choice between simple addition and the **CONCATENATE/TEXT** combination should be based on the intended purpose and downstream analysis of the resulting data. Use the following comparative summary to guide your method selection:

Method 1: Simple Addition (A2 + B2):

Pros: Generates a true numerical serial date value; highly suitable for advanced mathematical and analytical calculations (e.g., sorting efficiency, calculating time durations).

Cons: Requires an extra step for manual formatting adjustment after calculation; default formatting may not meet presentation standards (e.g., using 24-hour clock).

Method 2: CONCATENATE and TEXT:

Pros: Offers immediate, high-precision formatting control; results in a clean, human-readable string defined precisely by format codes.

Cons: Results in a static text string, rendering it unsuitable for reliable date/time mathematical calculations within the spreadsheet environment.

A mastery of both techniques ensures versatility in handling temporal data within Google Sheets, enabling you to prioritize either analytical precision or visual presentation, depending on the current task.