

# How to Calculate Years Between Dates in Google Sheets

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## Google Sheets: Calculate Years Between Two Dates

When working within the robust Google Sheets ecosystem, users frequently encounter the need to perform a data analysis involving the temporal distance between two specific points in time. Whether you are managing human resources records, tracking project milestones, or performing complex financial modeling, determining the precise number of years between dates is a fundamental skill. This calculation is not merely about subtraction; it involves understanding how a spreadsheet interprets chronological data as serial numbers and how specific functions can refine that data into actionable insights.

The flexibility of Google Sheets allows for various levels of precision depending on the specific requirements of your report. For some scenarios, a simple count of whole years is sufficient, while other more technical applications require a high degree of accuracy, including decimal representations of time. By leveraging built-in algorithms, users can automate these calculations, ensuring that their data management remains consistent, error-free, and scalable across large datasets containing thousands of entries.

To achieve these results, we primarily utilize two distinct approaches. The first approach focuses on the extraction of absolute whole years, which is ideal for calculating age or years of service. The second approach provides a fractional result, which is essential for interest accrual calculations or precise timeline assessments. Below are the primary formulas that facilitate these operations within any standard spreadsheet environment:

### Formula 1: Calculate Full Years Between Two Dates

**=INT(YEARFRAC(A2,B2))**

### Formula 2: Calculate Fractional Years Between Two Dates

**YEARFRAC(A2,B2)**

In both of the aforementioned formulas, it is assumed that cell **A2** serves as the repository for the start date, while cell **B2** represents the concluding date. Proper data validation should be applied to these cells to ensure they are formatted as recognized date values, following standards such as ISO 8601, to prevent calculation errors. The following sections will provide an exhaustive examination of how to implement these formulas in a practical workspace.

	A	B	C	D
1	<b>Start Date</b>	<b>End Date</b>		
2	1/4/2005	2/10/2020		
3	3/15/2007	3/15/2022		
4	4/14/2008	4/18/2022		
5	4/19/2008	4/19/2022		
6	6/20/2013	5/20/2022		
7	7/10/2015	6/10/2022		
8	7/11/2016	6/15/2022		
9	8/14/2016	7/29/2022		
10	8/15/2017	10/30/2022		
11	9/12/2018	12/23/2022		
12				
13				
14				
15				

## Understanding the YEARFRAC Function Logic

The cornerstone of date-based calculations in modern spreadsheet applications is the YEARFRAC function. This function is designed to calculate the fraction of a year represented by the number of whole days between two dates. Unlike basic subtraction, which simply returns the total number of days, YEARFRAC accounts for the complexities of the calendar year, including leap years and varying month lengths. This makes it an indispensable tool for accounting and professional reporting.

One of the most powerful aspects of the YEARFRAC function is its ability to accept an optional "basis" argument. This argument determines which day-count convention is used during the calculation. For instance, some financial institutions use a 360-day year (the US NASD method), while others use the actual number of days in a year. By default, Google Sheets employs the US (NASD) 30/360 basis if the argument is omitted, though most general users find the "Actual/Actual" basis to be more intuitive for everyday time tracking.

When we wrap this function inside the INT function, we are essentially telling the software to ignore any remaining days that do not constitute a full calendar year. The INT function, which stands for "integer," rounds a number down to the nearest whole integer. This combination is the most reliable way to determine "completed" years, ensuring that a person who is one day shy of their next birthday is not erroneously credited with an extra year of age.

## Step-by-Step Implementation of Full Year Calculations

To begin the process of calculating full years, you must first organize your data into a clear, tabular format. Ensure that your "Start Date" and "End Date" columns are explicitly defined and that the Google Sheets engine recognizes them as dates rather than plain text. If the dates are aligned to the right of the cell by default, they are typically recognized as numeric values, which is the required state for arithmetic operations.

Once your database is prepared, navigate to the first empty cell in your destination column. In this example, we will use cell **C2** to house our result. By entering the formula combined with the INT function, you establish a rule that the spreadsheet will follow for every row. This automation is a key component of efficient information technology workflows, allowing for instantaneous updates if the source dates are ever modified.

After entering the formula, the "fill handle"--a small square at the bottom-right corner of the cell--can be utilized to propagate the logic down the entire column. This action copies the formula while dynamically adjusting the cell references (e.g., changing A2 to A3, A4, etc.). This feature of Google Sheets is known as relative referencing and is a cornerstone of functional programming within spreadsheets.

### Example 1: Practical Application for Full Years

Suppose we would like to calculate the number of full years between each start and end date to determine employee tenure or contract duration. In a formal business setting, reporting partial years might lead to confusion regarding pension eligibility or bonus structures, making the "full year" approach the standard choice.

We can type the following formula into cell **C2** to do so:

```
=INT(YEARFRAC(A2,B2))
```

We can then click and drag this formula down to each remaining cell in column C, ensuring that the logic is applied consistently across the entire dataset:

C2  $\nabla$  |  $\text{fx}$  =INT(YEARFRAC(A2,B2))

	A	B	C	D
1	<b>Start Date</b>	<b>End Date</b>	<b>Full Years Between Dates</b>	
2	1/4/2005	1/1/2022	16	
3	3/15/2007	3/15/2022	15	
4	4/14/2008	4/18/2022	14	
5	4/19/2008	4/19/2022	14	
6	6/20/2013	5/20/2022	8	
7	7/10/2015	6/10/2022	6	
8	7/11/2016	6/15/2022	5	
9	8/14/2016	7/29/2022	5	
10	8/15/2017	10/30/2022	5	
11	9/12/2018	12/23/2022	4	
12				
13				
14				
15				
16				
17				

Column C displays the number of full years between the start and end date in each row. The INT function effectively truncates the decimal portion, leaving only the completed cycles of the Earth's orbit around the sun that occurred between those two points in time.

For example, consider the following results generated by the formula:

There are exactly **16** full years between 1/4/2005 and 1/1/2022. Even though it is very close to 17, the full year has not yet been reached.

There are exactly **15** full years between 3/15/2007 and 3/15/2022, representing a perfect anniversary.

There are exactly **14** full years between 4/14/2008 and 4/18/2022, illustrating that the extra four days do not contribute to the "full year" count.

## Analyzing Fractional Years for Enhanced Precision

In certain analytical contexts, knowing the exact fractional difference between dates is more valuable than knowing only the completed years. This is particularly true in statistics, scientific research, or project management where progress is measured in increments. For instance, a project that has been running for 2.5 years is significantly different from one that has just reached

its second anniversary.

By removing the INT function, we allow the YEARFRAC output to remain in its raw decimal form. This decimal represents the exact proportion of the year that has passed. In Google Sheets, this value is calculated with high precision, often extending to several decimal places, providing a level of detail that is necessary for actuarial science and other rigorous disciplines.

When presenting this data, you may choose to format the resulting column to show a specific number of decimal places. This can be achieved through the "Format" menu in the user interface. Reducing the decimals can make the data more readable for executive summaries while maintaining the underlying accuracy of the calculus performed by the spreadsheet engine.

## Example 2: Practical Application for Fractional Years

Suppose we would like to calculate the number of fractional years between each start and end date for a data visualization project. This will allow us to create more nuanced charts and graphs that show continuous growth over time rather than staggered, year-by-year jumps.

We can type the following formula into cell **C2** to do so:

**=YEARFRAC(A2,B2)**

We can then click and drag this formula down to each remaining cell in column C, similar to the previous method:

C2     $\text{fx}$     =YEARFRAC(A2,B2)

	A	B	C	D
1	<b>Start Date</b>	<b>End Date</b>	<b>Full Years Between Dates</b>	
2	1/4/2005	1/1/2022	16.99166667	
3	3/15/2007	3/15/2022	15	
4	4/14/2008	4/18/2022	14.01111111	
5	4/19/2008	4/19/2022	14	
6	6/20/2013	5/20/2022	8.91666667	
7	7/10/2015	6/10/2022	6.91666667	
8	7/11/2016	6/15/2022	5.92777778	
9	8/14/2016	7/29/2022	5.95833333	
10	8/15/2017	10/30/2022	5.20833333	
11	9/12/2018	12/23/2022	4.28055556	
12				
13				
14				
15				
16				

Column C now displays the precise number of fractional years between the start and end date in each row. This information is vital for linear interpolation and other advanced mathematical optimization techniques used in modern business intelligence.

For example, the results are now much more specific:

There are **16.992** years between 1/4/2005 and 1/1/2022, showing just how close the dates were to the 17-year mark.

There are **15** years between 3/15/2007 and 3/15/2022, as the end date falls exactly on the anniversary.

There are **14.011** years between 4/14/2008 and 4/18/2022, accounting for the small handful of days past the 14-year anniversary.

## Best Practices and Advanced Functionality

To ensure the highest level of accuracy when using Google Sheets for date and time calculations, it is essential to follow established best practices. First, always ensure that your dates are not entered as strings (text). If you import data from an external CSV file, you may need to use the "Date" format option to convert these strings into the serial numbers that the YEARFRAC function requires.

Furthermore, it is worth noting that while [YEARFRAC](#) is excellent for general use, [Google Sheets](#) also supports the DATEDIF function. DATEDIF is a legacy function that can also calculate the difference between dates in various units such as years ("Y"), months ("M"), or days ("D"). However, [YEARFRAC](#) is generally preferred when fractional results are needed, as DATEDIF is limited to returning whole integers based on the unit specified.

**Note:** You can find the complete documentation for the **YEARFRAC** function in the [official Google Editors Help](#) center. Utilizing official documentation is the best way to stay updated on new features, changes to [syntax](#), or improvements to function performance that Google may roll out during regular software updates.

## Expanding Your Spreadsheet Proficiency

Mastering date calculations is just the beginning of what is possible within a professional [spreadsheet](#) environment. As you become more comfortable with functions like [INT](#) and [YEARFRAC](#), you can begin to nest these formulas within conditional logic statements, such as IF or SWITCH, to create dynamic dashboards that respond to real-time data changes.

The ability to accurately measure time is a universal requirement in the modern professional landscape. From calculating the [depreciation](#) of assets to determining the [standard of living](#) adjustments over several decades, the principles outlined in this guide provide the foundational knowledge necessary to handle complex temporal data with confidence and precision.

The following tutorials explain how to perform other common tasks in Google Sheets, further expanding your capabilities in [data processing](#) and technical reporting: