

How to Combine Rows with the Same ID in Excel: Using the Consolidate Function

Authored by
Mohammed looti

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Data management frequently demands the simplification of vast datasets by aggregating individual records based on shared identifiers. In [Excel](#), the robust, native **Consolidate function** offers an elegant and efficient solution for this crucial task. This powerful feature enables users to combine multiple rows that possess the same key identifier--such as an employee code, a unique product SKU, or a transaction reference ID--while simultaneously applying a designated mathematical operation (including summing, counting, or averaging) to the associated numerical columns. Mastering this tool is essential for data analysts aiming to transform detailed transaction logs into succinct, actionable summary reports with maximum speed and precision.

Unlike basic filtering or advanced sorting operations, the **Consolidate function** is specifically engineered for cross-referencing and summarizing numerical information that may be scattered across various ranges, different worksheets within the same workbook, or even distinct workbooks entirely. When processing substantial volumes of raw input where the same entity, defined by its unique ID, appears repeatedly, the consolidation feature becomes an indispensable mechanism. It allows the user to generate a singular, comprehensive record for each unique entity. This streamlined approach offers significant time savings compared to manual lookups or constructing complex formulas, provided the initial source data structure remains consistent.

	A	B	C	D	E	F	G	H
1	ID	Name	Sales			ID	Name	Sales
2	A001	Andy	7			A001		15
3	A001	Andy	5			A004		23
4	A004	Doug	9			A002		9
5	A001	Andy	3			A003		8
6	A002	Bob	3					
7	A004	Doug	10					
8	A004	Doug	4					
9	A003	Chad	8					
10	A002	Bob	4					
11	A002	Bob	2					
12								
13								
14								
15								
16								
17								
18								

The following comprehensive guide will systematically demonstrate the practical application of this function using a common business scenario involving sales data. We will meticulously cover how to structure the input data, configure the necessary consolidation parameters within the dialogue

box, and accurately interpret the final output, ensuring you can confidently integrate this technique into your daily [data analysis](#) workflows.

Deconstructing the Data Consolidation Mechanism

Before initiating the aggregation process, it is vital to understand the operational mechanics of the **Consolidate function**. Fundamentally, the function utilizes a grouping mechanism that is driven by the text labels present in the reference area. When you specify the use of labels from both the top row and, more importantly, the left column, [Excel](#) interprets the data in the left-most column--which in our scenario corresponds to the **ID column**--as the definitive grouping key. Consequently, all records sharing an identical value in this key column are automatically treated as belonging to the same group.

Once these distinct groups are successfully defined, Excel proceeds to apply the selected [summary statistic](#), such as **Sum**, **Average**, or **Count**, to the corresponding values found in the numerical columns of the input range. The immediate result is a brand-new summary table that contains one unique row for every grouping key (ID), accompanied by the meticulously aggregated results derived from all the original matching rows. This makes consolidation an exceptionally effective tool for summarizing sales, inventory movements, or complex financial transactions where numerous individual entries relate back to a single account or individual employee.

Crucially, the consolidation process is non-destructive; it does not introduce any changes whatsoever to the original source data. Instead, it generates an entirely new result set starting precisely at the destination cell you specify. This methodology permits easy experimentation and iteration without posing any risk to the integrity of the underlying transactional data. Furthermore, while this guide focuses on combining rows based on a single column (the ID), the tool is versatile enough to consolidate data based on combinations of both row and column labels, thereby enabling more complex, matrix-style data summarization if required by the reporting needs.

A Practical Scenario: Consolidating Sales Data

To provide a clear illustration of this function's practical utility, let us consider a typical dataset capturing detailed sales information generated by various employees within an organization. This raw, transactional data frequently contains duplicate entries for the employee **ID column**, reflecting the multiple individual transactions carried out by the same person throughout a given reporting period. Our primary objective is to generate a concise summary report that accurately displays the total sales volume achieved by each unique employee ID.

Suppose our starting point is the following raw dataset, structured in [Excel](#), detailing individual transaction records:

	A	B	C	D	E	F
1	ID	Name	Sales			
2	A001	Andy	7			
3	A001	Andy	5			
4	A004	Doug	9			
5	A001	Andy	3			
6	A002	Bob	3			
7	A004	Doug	10			
8	A004	Doug	4			
9	A003	Chad	8			
10	A002	Bob	4			
11	A002	Bob	2			
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17						
18						

Note carefully that multiple rows within this table share the same value in the **ID column** (e.g., A001 appears three times, A003 appears twice). Our goal is to consolidate these entries into single records and compute the cumulative sum of values located in the **Sales column** for each corresponding ID. The subsequent steps provide the exact sequence required to successfully execute this data consolidation process.

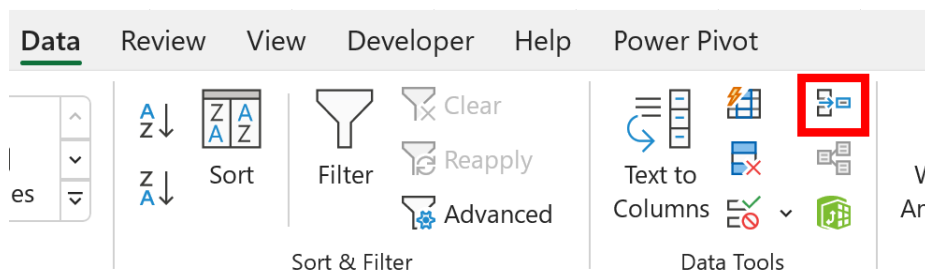
Step-by-Step Execution of the Consolidate Function

The consolidation procedure initiates with the preparation of the destination area for the resulting summary table. For this demonstration, we will assume the summary report should begin in cell **E1**, making it essential that this cell is actively selected before proceeding. The necessary steps are detailed below:

Navigate to the **Data tab**, which is positioned along the top ribbon interface of Excel.

Within the **Data Tools** group, precisely locate and click the icon labeled [Consolidate function](#). Executing this step will immediately open the dedicated Consolidate dialogue box.

The visual location of the tool within the ribbon is confirmed here:



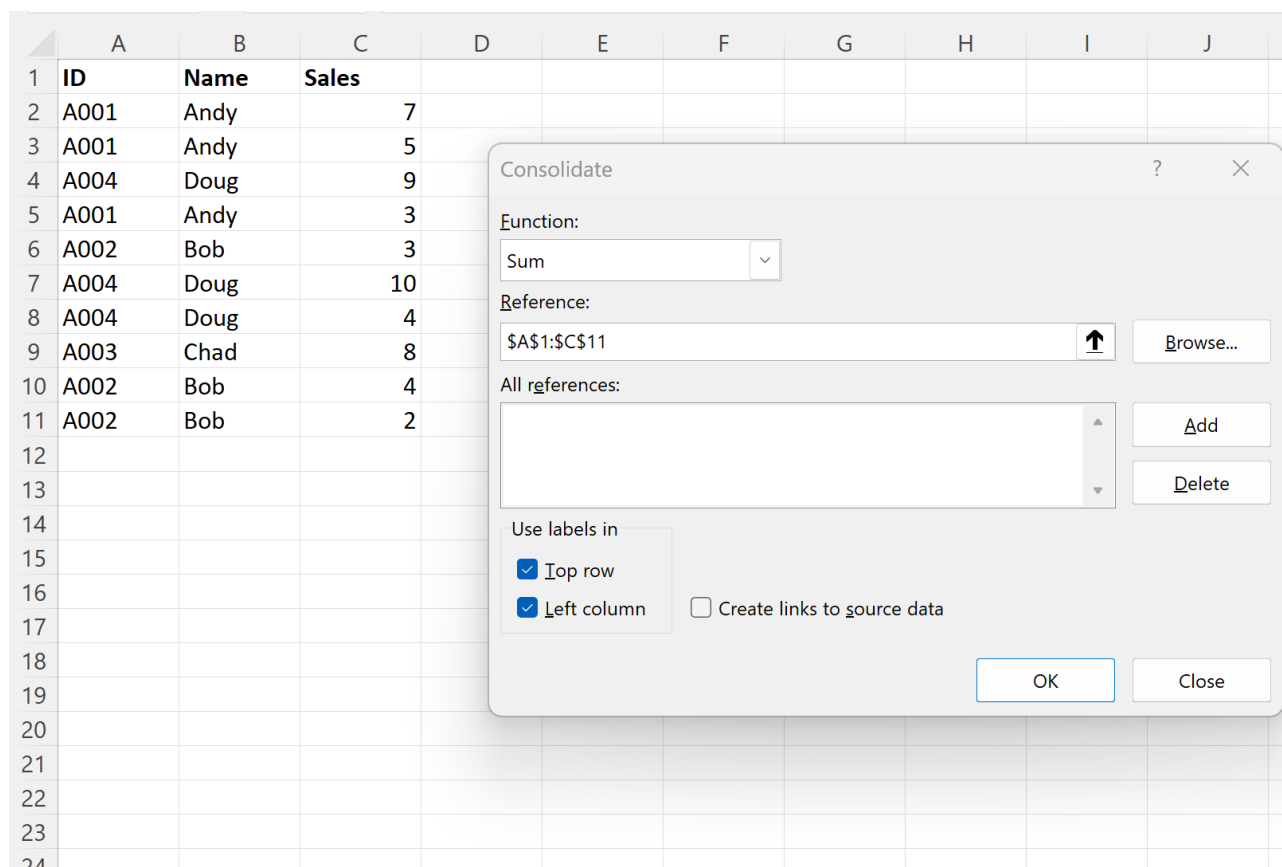
Once the dialogue box is active, precise configuration of the parameters is mandatory to ensure accurate data aggregation. Within this window, you must specify three critical configuration settings:

Function: This defines the aggregation method. Given our objective of calculating total sales, select **Sum** from the Function dropdown menu.

Reference: Define the exact range of the source data that needs to be analyzed. In this particular example, the range should be typed or selected as **A1:C11**, which must encompass all relevant data columns (ID, Name, and Sales) along with the initial header row.

Use labels in: Check the boxes corresponding to both **Top Row** and **Left column**. Checking the **Left column** checkbox is absolutely paramount for this task, as it explicitly instructs Excel to use the values found in the first column (our unique IDs) as the criteria for grouping the data. Checking the **Top Row** ensures that the resulting summary table includes the correct header names (e.g., Sales) for the aggregated columns.

The final configuration settings within the dialogue box should visually correspond with the following image:



Validating and Interpreting the Consolidated Output

Upon clicking **OK**, [Excel](#) executes the complex consolidation logic instantaneously. The program performs an iteration across the defined range, groups all rows sharing an identical value in the **ID column**, and applies the selected **Sum** function to the corresponding numerical data points. The resulting summary table, which correctly begins at cell E1 as specified, presents a clean, fully aggregated view of the original source data.

	A	B	C	D	E	F	G
1	ID	Name	Sales			Name	Sales
2	A001	Andy	7		A001		15
3	A001	Andy	5		A004		23
4	A004	Doug	9		A002		9
5	A001	Andy	3		A003		8
6	A002	Bob	3				
7	A004	Doug	10				
8	A004	Doug	4				
9	A003	Chad	8				
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This resultant dataset has successfully combined all disparate rows from the original table, providing the calculated total sum of sales for every unique identifier. For verification, if we examine the consolidation for the employee with ID value **A001**, we confirm that the original dataset included individual sales figures of 7, 5, and 3. The consolidated output correctly displays a single total sales figure of 15 ($7 + 5 + 3$), thereby confirming the precise accuracy of the operation. This entire process is replicated automatically for every unique identifier found in the source range, offering an immediate, verifiable, and highly insightful summary.

The clear structure and immediate utility of this final report showcase the primary advantage of the **Consolidate function**: its ability to quickly transform noisy, transaction-level data into a succinct, high-level summary that is perfectly suitable for executive reporting or further detailed [data analysis](#). The ability to verify the aggregated totals against the source data rapidly is a cornerstone of reliable data management practices.

Exploring Advanced Alternatives and Best Practices

While the **Consolidate function** is exceptionally effective for quick summation based on a single key identifier, it is important for analysts to recognize that [Excel](#) offers several alternative methods for data aggregation, each tailored to different levels of complexity and reporting demands. For

instance, **Pivot Tables** are frequently regarded as the industry standard for efficiently summarizing, analyzing, exploring, and presenting complex data structures. Unlike the static nature of standard consolidation, [Pivot Tables](#) provide superior flexibility in defining multiple grouping fields, dynamically changing the [summary statistic](#) calculations, and easily filtering the results without needing to re-run the core aggregation tool repeatedly.

Another highly viable alternative involves leveraging advanced formulas, most notably the **SUMIF** or **SUMIFS** functions, particularly when the required consolidation must occur dynamically within a larger, interconnected worksheet structure. While these formulas demand more manual setup--specifically defining the criteria range and the sum range--they offer precise control and, crucially, update automatically if the source data changes. This automatic update capability is a significant advantage that the standard **Consolidate function** lacks unless specific linking options are enabled.

Furthermore, the utility of the **Consolidate function** extends well beyond simple summation. Analysts should note that they can readily adjust the aggregation methodology by simply selecting a different value from the **Function** dropdown menu within the Consolidate window. Available options include:

Count: Highly useful for determining the frequency or total number of transactions associated with each unique ID.

Average: Calculates the mean value of sales per ID, providing swift insight into the typical transaction size.

Max/Min: Quickly identifies the highest or lowest sales value recorded for a specific ID over the period.

Product: Calculates the product of the values, although this specific function is less frequently used in typical sales reporting and data aggregation contexts.

Choosing the most appropriate [summary statistic](#) is critical; the selection must always align directly with the reporting question the analyst is attempting to answer, ensuring that the resulting data is meaningful and effectively supports informed decision-making.

Data Consistency and Overcoming Limitations

To guarantee successful and repeatable results when leveraging the **Consolidate function**, analysts must strictly adhere to several fundamental best practices regarding initial data preparation. First and foremost, absolute consistency in the **ID column** is paramount; even minor variations (such as accidental leading spaces, trailing characters, or differences in capitalization) will cause Excel to incorrectly treat those entries as distinct records, completely defeating the purpose of accurate grouping. Second, analysts must ensure that the columns targeted for aggregation contain exclusively numerical data, as text entries will be ignored or potentially result

in errors when mathematical functions like **Sum** or **Average** are applied.

A recognized limitation of the default consolidation process is its inherent static nature. If the source data is later modified--for example, if a new transaction is added or an existing sales figure requires correction--the consolidated output will not automatically update to reflect these changes. The entire consolidation process must be manually re-run to incorporate the new data. To mitigate this, the Consolidate dialogue box includes an essential option to **Create links to source data**. Selecting this option generates the consolidated report using outline groupings, which enables the summary figures to update dynamically when the source data changes, although this feature can sometimes introduce structural complexity if the underlying source data is exceptionally volatile.

Finally, while the **Consolidate function** excels at summarizing data based on a single key column (the left column), its capability for handling multi-criteria grouping is inherently limited when compared to the flexibility offered by **Pivot Tables**. For scenarios requiring simultaneous grouping by both Employee ID and Region, for example, the analyst will generally find that [Pivot Tables](#) or advanced array formulas are far better suited to address the complexity of the required [data analysis](#) task.

Additional Resources for Advanced Data Management

To further enhance your proficiency in advanced data manipulation and sophisticated reporting capabilities within [Excel](#), we highly recommend exploring detailed tutorials related to complementary functions and specialized tools. These resources will equip you to manage highly complex datasets, perform multi-criteria calculations efficiently, and produce sophisticated analytical reports that extend well beyond simple row combination.

The following areas represent key knowledge segments for any professional data analyst:

How to create and customize Dynamic [Pivot Tables](#) for flexible and interactive reporting.

Utilizing **SUMIFS** and **COUNTIFS** for conditional aggregation based on multiple, complex criteria.

Implementing robust data validation rules to maintain structure and consistency in key identifier fields, such as the **ID column**.

Effective techniques for cleaning and preparing raw data using features like Text to Columns, Flash Fill, and the TRIM functions.

By effectively integrating the knowledge of the **Consolidate function** with these advanced techniques, you can significantly improve the overall efficiency, reliability, and analytical depth of your data processing workflows.