

How to Round Numbers to 2 Decimal Places in Power BI

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Data visualization platforms like Power BI are indispensable for transforming complex datasets into actionable insights. However, raw data often contains numerical values with excessive precision, displaying many unnecessary decimal places. This can clutter reports and reduce readability, making it difficult for stakeholders to grasp the essential figures quickly. Consequently, mastering techniques for numerical rounding is a foundational skill for any data professional utilizing this platform.

There are two primary, distinct methods available within the Power BI environment for achieving the goal of rounding numbers to a specified number of decimal places, typically two. The first method focuses purely on visual formatting and is accessible directly through the visual interface using the **Column tools**. This changes how the number is displayed in reports without altering the underlying value stored in the data model. The second method, which involves writing analytical logic using DAX (Data Analysis Expressions), creates a permanent, calculated column or measure where the value itself is mathematically rounded. Both approaches are powerful, but they serve different purposes related to data presentation versus data calculation.

To effectively manage numerical data presentation and calculation integrity in your dashboards, you can employ one of the following methods to round values to 2 decimal places in Power BI:

Method 1: Use the Decimal Places Feature in Column Tools

This technique is the fastest way to adjust the visual appearance of a numeric column in the reporting canvas. It is purely a formatting operation, ideal when the underlying mathematical precision must be preserved for subsequent calculations, but the display needs simplification. It provides instant control over the number of digits shown after the decimal point.

Method 2: Use the ROUND Function in DAX

This approach uses the powerful DAX language to create a calculated result. Unlike formatting, this method performs true mathematical rounding, meaning the new column stores the actual rounded value. This is necessary when you need to use the rounded result in further calculations, aggregations, or complex conditional logic.

The subsequent sections provide detailed, practical examples demonstrating how to implement each method successfully. We will utilize the following sample data table loaded into Power BI for consistency across both examples:

File Home Help **Table tools**

Name

Structure

Mark as date table Calendars

Manage relationships Relationships

New measure Calculations

Quick measure Calculations

New column Calculations

New table Calculations

Employee	Avg Sales
Andy	11.89343
Bob	12.2342
Chad	20.2009
Doug	15.0012
Eric	11.3869
Frank	15.2299
Greg	15.8973
Henry	22.4005
Isaac	29.5453
John	12.9228
Kendall	10.0654
Luke	10.4522

Example 1: Rounding to 2 Decimal Places Using Column Tools (Visual Formatting)

When the requirement is solely to clean up the visual display of numbers without affecting the underlying data model's numerical precision, utilizing the dedicated formatting features is the most efficient path. This process requires interaction directly with the column's properties within the modeling or reporting view of Power BI.

To implement this visual rounding technique, begin by ensuring the table containing the relevant column is selected. Then, specifically click the name of the column you wish to format (e.g., "Avg Sales") either in the Fields pane or directly within the table visualization. This action triggers the activation of the contextual menu tabs necessary for modifying the column's attributes.

Once the column is selected, navigate to the **Column tools** tab located along the top ribbon interface. Within this tab, you will find a dedicated section for formatting numerical properties. Locate the input box labeled **decimal places**. Simply input the desired precision level, in this case, the integer value **2**, and press Enter or click away to apply the setting. This change immediately dictates that the values in this column, when displayed in any visual element, will show exactly two

digits following the decimal point.

The screenshot shows the Power BI interface with the 'Column tools' tab selected. The 'Format' dropdown is set to 'Decimal number' and the 'Decimal places' spinner is set to '2'. Below the ribbon, a table shows the 'Avg Sales' column with values rounded to two decimal places.

Employee	Avg Sales
Andy	11.89
Bob	12.23
Chad	20.20
Doug	15.00
Eric	11.39
Frank	15.23
Greg	15.90
Henry	22.40
Isaac	29.55
John	12.92
Kendall	10.07
Luke	10.45

Upon implementing the formatting change, observe the impact on the selected column, such as the **Avg Sales** column in the visual above. Every value within the column is now visually constrained and presented with exactly 2 decimal places. It is important to remember that this process may involve standard mathematical rounding rules applied for display purposes, but the full, unrounded value remains accessible for measure calculations in the data model.

For example, applying this formatting method yields the following results:

The raw value 11.89343 has been rounded visually to **11.89**.

The raw value 12.2342 has been rounded visually to **12.23**.

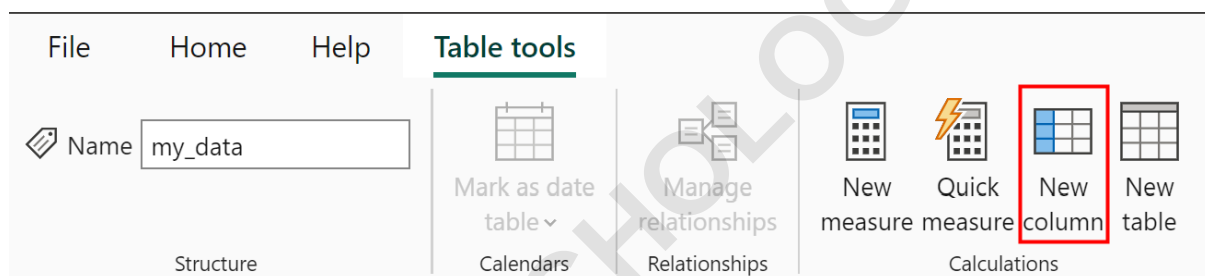
The raw value 20.2009 has been rounded visually to **20.20**.

This demonstrates the instantaneous effect of using Column Tools for visual data cleanup, significantly enhancing the professional look and readability of your reports. This method is highly recommended for scenarios where calculation integrity based on high precision is paramount, but clean display is required.

Example 2: Rounding to 2 Decimal Places Using DAX (Calculated Precision)

While visual formatting is useful, there are many instances where the calculated result itself must be rounded. This typically occurs when a subsequent calculation relies on the rounded output, or when you need to store the rounded number permanently in the data model. For these requirements, the DAX ROUND function is the definitive solution, enabling the creation of new calculated columns or measures.

The DAX language offers several numerical functions, including **ROUND**, which adheres to standard mathematical rounding rules (rounding half up). To begin using this functionality, you must first create a dedicated space for the calculated result. Navigate to the **Table tools** tab in the Power BI ribbon interface, which becomes active when your data table is selected. From there, click the **New column** option. This action opens the formula bar, ready to accept the DAX expression that will define the contents of the new column.



DAX Deep Dive: Syntax and Behavior of the ROUND Function

The syntax for the **ROUND** function in DAX is straightforward and highly effective. It requires two primary arguments: the numerical value or column reference to be rounded, and an integer specifying the number of digits to which the value should be rounded. The function takes the form `ROUND(<Number>, <Num_digits>)`. When `<Num_digits>` is positive, it specifies the number of digits to the right of the decimal point. If it were zero, it would round to the nearest integer, and a negative value would round to the left of the decimal point (e.g., to the nearest tens or hundreds).

For our specific goal of rounding to 2 decimal places, the `<Num_digits>` argument must be set to 2. We will apply this logic to the existing column within the table named 'my_data'. The full formula to be entered into the formula bar is as follows:

Avg Sales Rounded = ROUND('my_data', 2)

Executing this formula calculates a result for every row in the table, thereby creating a new column named **Avg Sales Rounded**. Crucially, every value in this new column is now a mathematically

rounded numerical value derived from the original **Avg Sales** column. This ensures that any subsequent measure or calculation that references this new column will use the 2-decimal rounding result, guaranteeing consistency in numerical output throughout the model.

The screenshot shows the Power BI interface with the 'Table tools' ribbon selected. The 'Name' field is set to 'my_data'. The 'Table tools' ribbon includes options like 'Mark as date table', 'Manage relationships', and 'Calculations'. The 'Column tools' ribbon is also visible. The 'Calculations' section shows a formula bar with the following DAX formula:

```
1 Avg Sales Rounded = ROUND('my_data'[Avg Sales], 2)
```

Below the formula bar, a table is displayed with the following data:

Employee	Avg Sales	Avg Sales Rounded
Andy	11.8934	11.89
Bob	12.2342	12.23
Chad	20.2009	20.2
Doug	15.0012	15
Eric	11.3869	11.39
Frank	15.2299	15.23
Greg	15.8973	15.9
Henry	22.4005	22.4
Isaac	29.5453	29.55
John	12.9228	12.92
Kendall	10.0654	10.07
Luke	10.4522	10.45

Understanding Nuances: Display vs. Calculated Rounding

While both methods achieve the visual goal of showing fewer digits, it is essential to distinguish their impact on the data model. The **Column tools** method is non-destructive; it only applies presentation layer formatting. If you were to calculate an average of the "Avg Sales" column, it would use the full precision values (e.g., 11.89343).

The **DAX ROUND** function, conversely, is destructive in terms of precision, though highly beneficial for calculation control. The new **Avg Sales Rounded** column contains values that have been permanently clipped to two decimal places. If you calculate an average of this new column, the result will be based exclusively on the rounded figures (e.g., 11.89). Understanding this distinction is vital for ensuring accurate financial modeling and statistical analysis.

It is also important to note a common behavior when working with calculated rounded values in DAX. If any of the rounded values mathematically result in trailing zeros (e.g., a number rounds

exactly to 15.00), the underlying numerical datatype in Power BI will often suppress these zeros when displaying the column in a table visual, showing the result simply as **15**. While mathematically correct, if you require the visual display to explicitly show "15.00," you would need to subsequently apply visual formatting using the Column Tools (Method 1) to the newly created DAX column to force the two-digit presentation format.

For example: The value **15.0012**, when rounded by DAX, results in the exact number **15.00**. Unless specific formatting is applied, this result is typically displayed as just **15** within the visualization layer.

For more detailed functional documentation on the **ROUND** function and other related numerical functions (such as ROUNDUP or ROUNDDOWN) within the DAX framework, refer to the official Microsoft documentation.

Conclusion: Choosing the Right Rounding Strategy

The choice between visual formatting via **Column Tools** and mathematical calculation via the **DAX ROUND** function depends entirely on the purpose of the rounding. If the goal is solely aesthetic--to make a report look cleaner--the Column Tools method is quicker and preserves the source data's mathematical integrity.

However, if the rounded value must be used as input for subsequent mathematical operations, such as creating new ratios, differences, or aggregations within your data model, then implementing the **ROUND** function in DAX is mandatory. This ensures that all calculations proceed using the consistent, explicitly rounded figures, preventing downstream decimal places creep and ensuring report reliability. Mastering both techniques ensures full control over both the visual presentation and the computational accuracy of your data analysis in Power BI.

The following resources explain how to perform other common tasks in Power BI: