

How to Transpose Every N Rows in Excel Easily

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Data manipulation within Microsoft Excel is a fundamental skill for advanced users, and among the most powerful techniques is transposing data. Transposing every N rows is a specific, highly efficient method for restructuring large datasets. This process involves taking sequential blocks of N rows and reorienting them horizontally into distinct columns.

This technique moves beyond simple transposition--which swaps all rows and columns--by selectively grouping data. Instead of utilizing Excel's standard "Transpose" paste option, which is suitable for small, static ranges, we employ dynamic formulas. This method is indispensable when dealing with extensive lists, such as inventory logs, survey responses, or complex scientific measurements, where organization by fixed intervals (N) is necessary for effective reporting and data analysis.

By successfully transposing every N rows, users can transform vertically oriented, often repetitive lists into a concise, easily navigable matrix structure within a spreadsheet. This not only significantly improves readability but also facilitates further calculations, such as summary statistics or comparison across the newly formed horizontal groups. We will explore a robust formula-based approach that enables this powerful data reorganization dynamically.

Transpose Every N Rows in Excel

Implementing the Dynamic N-Row Transposition Formula

To achieve the dynamic transposition of every N rows, where N represents the chosen interval (e.g., every 5th row), we rely on a sophisticated combination of three core Excel functions: INDEX, ROW, and COLUMN. These functions work together to calculate the precise row index required from the original data set for placement in the new, transposed location.

You can use the following syntax to transpose every nth row in Excel:

```
=INDEX($A:$A,ROW(A1)*5-5+COLUMN(A1))
```

This particular formula is configured to transpose every 5th row from the entire Column A in your Excel worksheet.

Understanding the Formula Mechanics

The core component, **INDEX(\$A:\$A, ...)**, is responsible for retrieving a value from Column A based on a calculated row number. The calculation within the parentheses determines precisely which row number is pulled for each new cell in the transposed range. The absolute reference **\$A:\$A** ensures that the source column never shifts as the formula is copied.

The calculation uses the current relative position of the cell where the formula is entered. Specifically, **ROW(A1)*5 - 5** calculates the starting row index of the appropriate data block. For instance, in the first output row, ROW(A1) returns 1, resulting in $1 * 5 - 5 = 0$. In the second output row, ROW(A2) returns 2, resulting in $2 * 5 - 5 = 5$, which correctly sets the starting index for the second group.

The final component, **+COLUMN(A1)**, acts as the offset within that block. As the formula is dragged horizontally, the COLUMN function increments (returning 1, 2, 3, etc.), ensuring sequential selection of the items within the N-row group. This dynamic interplay between ROW and COLUMN allows the single formula to map the vertical data precisely onto the horizontal output grid.

Note: To transpose a different multiple of rows, you must consistently change the numerical value **5** within the formula to your desired interval (N). For instance, transposing every 10 rows would require changing both occurrences of **5** to **10**.

Example: Preparing the Source Data

Let us demonstrate this technique using a realistic dataset where $N=5$. Suppose we have a list of fifteen basketball team names stored vertically in Column A of an Excel sheet. Our goal is to reorganize this list, grouping the teams into blocks of five, thereby transposing every 5th row to create a compact, three-row by five-column table.

Suppose we have the following column of 15 basketball team names in Excel, starting in cell A1:

	A	B	C	D	E
1	Mavs				
2	Spurs				
3	Rockets				
4	Kings				
5	Warriors				
6	Nets				
7	Lakers				
8	Thunder				
9	Blazers				
10	Jazz				
11	Suns				
12	Knicks				
13	Celtics				
14	Magic				
15	Heat				
16					

Now suppose that we would like to transpose the rows into columns based on every 5th row. We must choose an empty starting cell for our output, such as C2, where we will input the formula to begin the array generation.

Step-by-Step Formula Application

The implementation begins by inserting the full formula into the target starting cell, **C2**. This cell will retrieve the first data point, A1. The calculation ensures the index is 1, as INDEX needs the first row number to initiate the process.

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

=INDEX(\$A:\$A,ROW(A1)*5-5+COLUMN(A1))

The following screenshot demonstrates the successful insertion of this formula:

	A	B	C	D	E	F	G
1	Mavs		Mavs				
2	Spurs						
3	Rockets						
4	Kings						
5	Warriors						
6	Nets						
7	Lakers						
8	Thunder						
9	Blazers						
10	Jazz						
11	Suns						
12	Knicks						
13	Celtics						
14	Magic						
15	Heat						
16							

Expanding the Formula Horizontally

The next critical step is to extend the formula horizontally to capture the full five items in the first block. We must drag the fill handle from cell C2 across five columns to cell G2. This action leverages the relative reference functionality of the COLUMN function.

As the formula is dragged rightward, the COLUMN(A1) reference dynamically changes to COLUMN(B1), COLUMN(C1), and so on, returning 1, 2, 3, 4, and 5. This sequential increase correctly calculates the exact index needed to pull teams 1 through 5 from Column A into the first horizontal row.

Next, click and drag this formula to the right until 5 total team names are shown (up to cell G2):

	A	B	C	D	E	F	G
1	Mavs		Mavs	Spurs	Rockets	Kings	Warriors
2	Spurs						
3	Rockets						
4	Kings						
5	Warriors						
6	Nets						
7	Lakers						
8	Thunder						
9	Blazers						
10	Jazz						
11	Suns						
12	Knicks						
13	Celtics						
14	Magic						
15	Heat						
16							

Expanding the Formula Vertically to Complete the Transposition

Finally, we must expand the formula downward to capture the remaining blocks of data. Since we have 15 entries and are grouping by $N=5$, we require three total output rows. We will drag the formula range (C2:G2) down two more rows to C4:G4.

When the formula is dragged down to C3, the ROW(A1) reference shifts to ROW(A2), which returns 2. This updates the block calculation to $2 * 5 - 5 = 5$. Combined with the column offset, the data pull correctly starts from the 6th row (A6), capturing the second set of five teams.

Lastly, click and drag the formula down until every team name is shown:

	A	B	C	D	E	F	G	H
1	Mavs		Mavs	Spurs	Rockets	Kings	Warriors	
2	Spurs		Nets	Lakers	Thunder	Blazers	Jazz	
3	Rockets		Suns	Knicks	Celtics	Magic	Heat	
4	Kings							
5	Warriors							
6	Nets							
7	Lakers							
8	Thunder							
9	Blazers							
10	Jazz							
11	Suns							
12	Knicks							
13	Celtics							
14	Magic							
15	Heat							

Reviewing the Final Structured Output

The resulting grid is a concise and perfectly structured representation of the original lengthy list. The dynamic formula successfully reorganized the vertical data into discrete horizontal groups, proving its effectiveness for handling large, structured datasets.

The reorganized data exhibits the following structure:

The first five team names in column A are shown in the first row (C2:G2).

The second five team names in column A (A6-A10) are shown in the second row (C3:G3).

The third five team names in column A (A11-A15) are shown in the third row (C4:G4).

	A	B	C	D	E	F	G
1	Mavs		Mavs	Spurs	Rockets	Kings	Warriors
2	Spurs		Nets	Lakers	Thunder	Blazers	Jazz
3	Rockets		Suns	Knicks	Celtics	Magic	Heat
4	Kings						
5	Warriors						
6	Nets						
7	Lakers						
8	Thunder						
9	Blazers						
10	Jazz						
11	Suns						
12	Knicks						
13	Celtics						
14	Magic						
15	Heat						
16							
17							

This dynamic methodology ensures that future modifications to the source data in Column A are immediately reflected in the transposed table, providing a maintenance-free data view.

Additional Resources for Excel Data Management

Mastering the use of combined functions like INDEX, ROW, and COLUMN for advanced data manipulation tasks, such as transposing every N rows, unlocks significant efficiency in Excel. This technique is invaluable for anyone who frequently needs to convert lengthy vertical lists into compact, structured tables suitable for reporting and visualization.

The following tutorials explain how to perform other common tasks in Excel: