

EXAMPLE - NEXT Function

This example covers how to use the NEXT function to create windows of data from the current row and subsequent (next) rows in the dataset. You can then apply rolling computations across these windows of data.

Functions:

Item	Description
NEXT Function	Extracts the value from a column that is a specified number of rows after the current value.
ROLLINGAVERAGE Function	Computes the rolling average of values forward or backward of the current row within the specified column.
NUMFORMAT Function	Formats a numeric set of values according to the specified number formatting. Source values can be a literal numeric value, a function returning a numeric value, or reference to a column containing an Integer or Decimal values.

Source:

The following dataset contains order information for the preceding 12 months. You want to compare the current month's average against the preceding quarter.

Date	Amount
12/31/15	118
11/30/15	6
10/31/15	443
9/30/15	785
8/31/15	77
7/31/15	606
6/30/15	421
5/31/15	763
4/30/15	305
3/31/15	824
2/28/15	135
1/31/15	523

Transformation:

Using the ROLLINGAVERAGE function, you can generate a column containing the rolling average of the current month and the two previous months:

Transformation Name	Window
Parameter: Formulas	ROLLINGAVERAGE(Amount, 3, 0)
Parameter: Order by	-Date

Note the sign of the second parameter and the `order` parameter. The sort is in the reverse order of the `Date` parameter, which preserves the current sort order. As a result, the second parameter, which identifies the number of rows to use in the calculation, must be positive to capture the previous months.

Technically, this computation does not capture the prior quarter, since it includes the current quarter as part of the computation. You can use the following column to capture the rolling average of the preceding month, which then becomes the true rolling average for the prior quarter. The `window` column refers to the name of the column generated from the previous step:

Transformation Name	Window
Parameter: Formulas	NEXT(window, 1)
Parameter: Order by	-Date

Note that the order parameter must be preserved. This new column, `window1`, contains your prior quarter rolling average:

Transformation Name	Rename columns
Parameter: Option	Manual rename
Parameter: Column	window1
Parameter: New column name	'Amount_PriorQtr'

You can reformat this numeric value:

Transformation Name	Edit column with formula
Parameter: Columns	Amount_PriorQtr
Parameter: Formula	NUMFORMAT(Amount_PriorQtr, '###.00')

You can use the following transformation to calculate the net change. This formula computes the change as a percentage of the prior quarter and then formats it as a two-digit percentage.

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	NUMFORMAT(((Amount - Amount_PriorQtr) / Amount_PriorQtr) * 100, '##.##')
Parameter: New column name	'NetChangePct_PriorQtr'

Results:

NOTE: You might notice that there are computed values for `Amount_PriorQtr` for February and March. These values do not factor in a full three months because the data is not present. The January value does not exist since there is no data preceding it.

Date	Amount	Amount_PriorQtr	NetChangePct_PriorQtr
12/31/15	118	411.33	-71.31
11/30/15	6	435.00	-98.62
10/31/15	443	489.33	-9.47

9/30/15	785	368.00	113.32
8/31/15	77	596.67	-87.1
7/31/15	606	496.33	22.1
6/30/15	421	630.67	-33.25
5/31/15	763	421.33	81.09
4/30/15	305	494.00	-38.26
3/31/15	824	329.00	150.46
2/28/15	135	523.00	-.74.19
1/31/15	523		