

KTHLARGESTDATE Function

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Extracts the ranked Datetime value from the values in a column, where $k=1$ returns the maximum value. The value for k must be between 1 and 1000, inclusive. Inputs must be valid Datetime values.

For purposes of this calculation, two instances of the same value are treated as separate values. So, if your dataset contains three rows with column values 2020-02-15, 2020-02-14, and 2020-02-14, then KTHLARGESTDATE returns 2020-02-14 for $k=2$ and $k=3$.

When used in a `pivot` transform, the function is computed for each instance of the value specified in the `group` parameter. See *Pivot Transform*.

Input column must be Datetime type. Other values column are ignored. If a row contains a missing or null value, it is not factored into the calculation.

For a version of this function that applies to non-Datetime values, see *KTHLARGEST Function*.

Wrangle vs. SQL: This function is part of Wrangle, a proprietary data transformation language. Wrangle is not SQL. For more information, see *Wrangle Language*.

Basic Usage

```
kthlargestdate(myDate, 2)
```

Output: Returns the second highest Datetime value from the `myDate` column.

Syntax and Arguments

```
kthlargestdate(function_col_ref, k_integer) [ group:group_col_ref ] [ limit:limit_count ]
```

Argument	Required?	Data Type	Description
<code>function_col_ref</code>	Y	string	Name of column to which to apply the function
<code>k_integer</code>	Y	integer (positive)	The ranking of the value to extract from the source column

For more information on the `group` and `limit` parameters, see *Pivot Transform*.

For more information on syntax standards, see *Language Documentation Syntax Notes*.

function_col_ref

Name of the column the values of which you want to calculate the mean. Inputs must be Datetime values.

- Literal values are not supported as inputs.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value
Yes	String (column reference)	transactionDate

k_integer

Integer representing the ranking of the value to extract from the source column.

NOTE: The value for k must be an integer between 1 and 1,000 inclusive.

- $k=1$ represents the maximum value in the column.
- If k is greater than or equal to the number of values in the column, the minimum value is returned.
- Missing and null values are not factored into the ranking of k .

Usage Notes:

Required?	Data Type	Example Value
Yes	Integer (positive)	4

Examples

Tip: For additional examples, see *Common Tasks*.

Example - KTHLARGESTDATE functions

This example illustrates how you can apply conditionals to calculate minimum, maximum, and most common date values:

- **KTHLARGESTDATE** - Extracts the ranked Datetime value from the values in a column, where $k=1$ returns the maximum value. See *KTHLARGESTDATE Function*.
- **KTHLARGESTUNIQUEDATE** - Extracts the unique ranked Datetime value from the values in a column, where $k=1$ returns the maximum value. See *KTHLARGESTUNIQUEDATE Function*.
- **KTHLARGESTDATEIF** - Extracts the ranked Datetime value from the values in a column that meet a specified condition. See *KTHLARGESTDATEIF Function*.
- **KTHLARGESTUNIQUEDATEIF** - Extracts the ranked unique Datetime value from the values in a column that meet a specified condition. See *KTHLARGESTUNIQUEDATEIF Function*.

Source:

Here is some example transaction data:

Date	Product	Units	UnitCost	OrderValue
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3/28/2020	ProductA	4	10.00	40.00
3/8/2020	ProductB	4	20.00	80.00
3/12/2020	ProductC	2	30.00	60.00
3/23/2020	ProductA	1	10.00	10.00
3/20/2020	ProductB	2	20.00	40.00
3/12/2020	ProductC	9	30.00	270.00
3/28/2020	ProductA	5	10.00	50.00
3/23/2020	ProductB	8	20.00	160.00
3/16/2020	ProductC	9	30.00	270.00
3/8/2020	ProductA	5	10.00	50.00
3/10/2020	ProductB	3	20.00	60.00
3/13/2020	ProductC	1	30.00	30.00
3/12/2020	ProductA	7	10.00	70.00
3/10/2020	ProductB	7	20.00	140.00
3/24/2020	ProductC	9	30.00	270.00
3/15/2020	ProductA	8	10.00	80.00
3/10/2020	ProductB	5	20.00	100.00
3/10/2020	ProductC	4	30.00	120.00

Transformation:

The following transformation computes the third highest date in the Date column:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	kthlargestdate(Date, 3)
Parameter: New column name	'kthlargestdate'

This transformation computes the third highest unique value in the Date column:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	kthlargestuniquedate(Date, 3)
Parameter: New column name	'kthlargestuniquedate'

Following transformation calculates the 3rd highest date value when the OrderValue > 200:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	kthlargestdateif(Date, 3, OrderValue > 200)

Parameter: New column name	'kthlargestdateif'
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Following transformation calculates the 3rd highest unique date value when the OrderValue > 200:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	kthlargestuniquedateif(Date, 3, OrderValue > 200)
Parameter: New column name	'kthlargestuniquedateif'

Results:

Date	Product	Units	UnitCost	OrderValue	kthlargestdate	kthlargestuniquedate	kthlargestdateif	kthlargestu
3/28 /2020	ProductA	4	10.00	40.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/8 /2020	ProductB	4	20.00	80.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/12 /2020	ProductC	2	30.00	60.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/23 /2020	ProductA	1	10.00	10.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/20 /2020	ProductB	2	20.00	40.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/12 /2020	ProductC	9	30.00	270.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/28 /2020	ProductA	5	10.00	50.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/23 /2020	ProductB	8	20.00	160.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/16 /2020	ProductC	9	30.00	270.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/8 /2020	ProductA	5	10.00	50.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/10 /2020	ProductB	3	20.00	60.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/13 /2020	ProductC	1	30.00	30.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/12 /2020	ProductA	7	10.00	70.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/10 /2020	ProductB	7	20.00	140.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/24 /2020	ProductC	9	30.00	270.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/15 /2020	ProductA	8	10.00	80.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/10 /2020	ProductB	5	20.00	100.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020
3/10 /2020	ProductC	4	30.00	120.00	03-24-2020	03-23-2020	03-23-2020	03-23-2020

