

KTHLARGESTUNIQUEDATE Function

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Extracts the ranked unique 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 Datetime.

For purposes of this calculation, two instances of the same value are treated as the same value of k . If your dataset contains three rows with column values 2020-02-15, 2020-02-14, 2020-02-14, and 2020-02-14, then KTHLARGESTDATE returns 2020-02-14 for $k=2$ and 2020-02-13 for $k=3$.

- For a non-unique version of this function, see *KTHLARGESTDATE Function*.

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 *KTHLARGESTUNIQUE 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

```
kthlargestuniqueDate(myDate, 3)
```

Output: Returns the third highest unique value from the `myDate` column.

Syntax and Arguments

```
kthlargestuniqueDate(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 unique 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 unique value to extract from the source column. Duplicate values are treated as a single value for purposes of this function's calculation.

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
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'

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