

# KTHLARGESTUNIQUEDATE Function

## Contents:

- *Basic Usage*
- *Syntax and Arguments*
  - *function\_col\_ref*
  - *k\_integer*
- *Examples*
  - *Example - KTHLARGESTDATE functions*

---

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

```
kthlargestuniquevalue(myDate, 3)
```

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

## Syntax and Arguments

```
kthlargestuniquevalue(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:

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

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

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

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

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

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

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