

SIGN Function

Computes the positive or negative sign of a given numeric value. The value can be a Decimal or Integer literal, a function returning Decimal or Integer, or a reference to a column containing numeric values.

- For positive values, this function returns 1.
- For negative values, this function returns -1.
- For the value 0, this function returns 0.

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

Column reference example:

```
sign(MyInteger)
```

Output: Returns the sign of the value found in the `MyInteger` column.

Numeric literal example:

```
(sign(MyInteger) == -1)
```

Output: Returns `true` if the sign of the entry in the `MyInteger` column is `-1`.

Syntax and Arguments

```
sign(numeric_value)
```

Argument	Required?	Data Type	Description
numeric_value	Y	Decimal or Integer	Decimal or Integer literal, function returning Decimal or Integer, or name of column to apply to the function

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

numeric_value

Numeric literal, function returning numeric literal, or name of the column containing values the sign of which are to be computed.

- Missing input values generate missing results.
- Literal numeric values should not be quoted. Quoted values are treated as strings.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value
Yes	String (column reference) or Integer or Decimal value	-10.5

Examples

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

Example - Basic SIGN function

Source:

Your source data looks like the following, which measures coordinate distances from a fixed point on a grid:

X	Y
-2	4
-6.2	-2
0	-4.2
4	4
15	-0.05

Transformation:

You can use the following transform to derive the sign values of these columns:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	sign(X)
Parameter: New column name	'signX'

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	sign(Y)
Parameter: New column name	'signY'

Using these two columns, you can assign each set of coordinates into a quadrant. For ease of reading, the following has been broken into two separate transformations:

Transformation Name	Conditional column
Parameter: Condition type	Case on custom conditions
Parameter: Case 01 - Condition	(signX == 1) && (signY == -1)
Parameter: Case 01 - Value	'lower-right'
Parameter: Case 02 - Condition	(signX == 1) && (signY == 1)

Parameter: Case 02 - Value	'upper-right'
Parameter: Default value	'line'
Parameter: New column name	'q1'

Transformation Name	Conditional column
Parameter: Condition type	Case on custom conditions
Parameter: Case 01 - Condition	(signX == -1) && (signY == -1)
Parameter: Case 01 - Value	'lower-left'
Parameter: Case 02 - Condition	(signX == -1) && (signY == 1)
Parameter: Case 02 - Value	'upper-left'
Parameter: Default value	'line'
Parameter: New column name	'q2'

Then, you can merge the two columns together:

Transformation Name	Merge columns
Parameter: Columns	q1, q2
Parameter: Separator	' '
Parameter: New column name	'quadrant'

Results:

X	Y	signX	signY	quadrant
-2	4	-1	1	upper-left
-6.2	-2	-1	-1	lower-left
0	-4.2	0	-1	line
4	4	1	1	upper-right
15	-0.05	1	-1	lower-right