

DEGREES Function

Computes the degrees of an input value measuring the radians of an angle. The value can be a Decimal or Integer literal or a reference to a column containing numeric values.

- Input units are in radians.
- You can convert from degrees to radians. For more information, see *RADIANS Function*.

Basic Usage

Numeric literal example:

```
derive type:single value: ROUND(DEGREES(1.0000),4)
```

Output: Generates a column containing the computation in degrees of 1.0000 radians, which is 57.2728.

Column reference example:

```
derive type:single value: DEGREES(myRads) as: myDegrees'
```

Output: Generates the new `myDegrees` column containing the conversion of the values in `MyRads` column to degrees.

Syntax and Arguments

```
derive type:single value: DEGREES(numeric_value)
```

| Argument | Required? | Data Type | Description |
|---------------|-----------|-----------------------------|--|
| numeric_value | Y | string, decimal, or integer | Name of column, Decimal or Integer literal, or function returning those types to apply to the function |

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

numeric_value

Name of the column, Integer or Decimal literal, or function returning that data type to apply to the function.

- 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 literal | 3.14 |

Examples

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

Example - DEGREES and RADIANS functions

This example illustrates to use the DEGREES and RADIANS functions to convert values from one unit of measure to the other.

- See *DEGREES Function*.
- See *RADIANS Function*.

Source:

In this example, the source data contains information about a set of isosceles triangles. Each triangle is listed in a separate row, with the listed value as the size of the non-congruent angle in the triangle in degrees.

You must calculate the measurement of all three angles of each isosceles triangle in radians.

| triangle | a01 |
|----------|-----|
| t01 | 30 |
| t02 | 60 |
| t03 | 90 |
| t04 | 120 |
| t05 | 150 |

Transform:

You can convert the value for the non-congruent angle to radians using the following:

```
derive type:single value: ROUND(RADIANS(a01), 4) as: 'r01'
```

Now, calculate the value in degrees of the remaining two angles, which are congruent. Since the sum of all angles in a triangle is 180, the following formula can be applied to compute the size in degrees of each of these angles:

```
derive type:single value: (180 - a01) / 2 as: 'a02'
```

Convert the above to radians:

```
derive type:single value: ROUND(RADIANS(a02), 4) as: 'r02'
```

Create a second column for the other congruent angle:

```
derive type:single value: ROUND(RADIANS(a02), 4) as: 'r03'
```

To check accuracy, you sum all three columns and convert to degrees:

```
derive type:single value: ROUND(DEGREES(r01 + r02 + r03), 4) as: 'checksum'
```

Results:

After you drop the intermediate columns, you see the following results and determine the error in the checksum is acceptable:

| triangle | a01 | r03 | r02 | r01 | checksum |
|----------|-----|--------|--------|--------|----------|
| t01 | 30 | 1.3095 | 1.3095 | 0.5238 | 179.9967 |

| | | | | | |
|-----|-----|--------|--------|--------|----------|
| t02 | 60 | 1.0476 | 1.0476 | 1.0476 | 179.9967 |
| t03 | 90 | 0.7857 | 0.7857 | 1.5714 | 179.9967 |
| t04 | 120 | 0.5238 | 0.5238 | 2.0952 | 179.9967 |
| t05 | 150 | 0.2619 | 0.2619 | 2.6190 | 179.9967 |