

# ABS Function

Computes the absolute value of a given numeric value. The value can be a Decimal or Integer literal or a reference to a column containing numeric values.

**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:

```
abs(MyInteger)
```

**Output:** Returns the absolute value of each value found in the `MyInteger` column.

### Numeric literal example:

```
(abs(MyInteger) == 5)
```

**Output:** Returns `true` if the absolute value of the entry in the `MyInteger` column is 5.

## Syntax and Arguments

```
abs(numeric_value)
```

| Argument                   | Required? | Data Type                   | Description   |
|----------------------------|-----------|-----------------------------|---|
| <code>numeric_value</code> | Y         | string, decimal, or integer | Name of column or Decimal or Integer literal to apply to the function |

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

### **numeric\_value**

Name of the column or numeric literal whose absolute value is 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 | <code>-10.5</code> |

## Examples

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

## Example - Basic ABS 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 |

### Transform:

You can use the following transform to derive the absolute values of these columns, which now measure distance from the fixed point:

|                                   |                    |
|-----------------------------------|--------------------|
| <b>Transformation Name</b>        | New formula        |
| <b>Parameter: Formula type</b>    | Single row formula |
| <b>Parameter: Formula</b>         | abs(X)             |
| <b>Parameter: New column name</b> | 'distanceX'        |

|                                   |                    |
|-----------------------------------|--------------------|
| <b>Transformation Name</b>        | New formula        |
| <b>Parameter: Formula type</b>    | Single row formula |
| <b>Parameter: Formula</b>         | abs(y)             |
| <b>Parameter: New column name</b> | 'distanceY'        |

### Results:

| X    | Y     | distanceX | distanceY |
|------|-------|-----------|-----------|
| -2   | 4     | 2         | 4         |
| -6.2 | -2    | 6.2       | 2         |
| 0    | -4.2  | 0         | 4.2       |
| 4    | 4     | 4         | 4         |
| 15   | -0.05 | 15        | 0.05      |

You can then use `POW` and `SQRT` functions to compute the total distance.