

# ISODD Function

Returns `true` if the argument is an odd value. Argument can be an Integer, a function returning Integers, or a column reference.

Since the function returns a Boolean value, it can be used as a function or a conditional.

**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

### Integer literal value:

```
isodd('3')
```

**Output:** Returns the value `true`.

### Column reference value:

```
isodd(countStudents)
```

**Output:** If the value in the `countStudents` column is an odd number, then return `true`.

## Syntax and Arguments

```
isodd(int_value)
```

Argument	Required?	Data Type	Description
<code>int_value</code>	Y	integer	This value can be an Integer, a function returning an Integer, or a column reference.

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

### `int_value`

Name of the columns, expressions, or literals to compare.

- Missing values generate missing string results.

### Usage Notes:

Required?	Data Type	Example Value
Yes	Column reference, function, or Integer literal value	<code>myColumn</code>

## Examples

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

## Example - Basic Equal and Notequal Functions

This example demonstrate the following comparison functions.

- See *EQUAL Function*.
- See *NOTEQUAL Function*.
- See *ISEVEN Function*.
- See *ISODD Function*.

In this example, the dataset contains current measurements of the sides of rectangular areas next to the size of those areas as previously reported. Using these functions, you can perform some light analysis of the data.

### Source:

sideA	sideB	reportedArea
4	14	56
6	6	35
8	4	32
15	15	200
4	7	28
12	6	70
9	9	81

### Transformation:

In the first test, you are determining if the four-sided area is a square, based on a comparison of the measured values for `sideA` and `sideB`:

<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	<code>EQUAL(sideA, sideB)</code>
<b>Parameter: New column name</b>	'isSquare'

Next, you can use the reported sides to calculate the area of the shape and compare it to the area previously reported:

<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	<code>NOTEQUAL(sideA * sideB, reportedArea)</code>
<b>Parameter: New column name</b>	'isValidData'

You can also compute if the reportedArea can be divided into even square units:

<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula

<b>Parameter: Formula</b>	ISEVEN(reportedArea)
<b>Parameter: New column name</b>	'isReportedAreaEven'

You can test if either measured side is an odd number of units:

<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	IF((ISODD(sideA) == true) OR (ISODD(sideB) == true),TRUE,FALSE)
<b>Parameter: New column name</b>	'isSideOdd'

**Results:**

sideA	sideB	reportedArea	isSquare	isValidData	isReportedAreaEven	isSideOdd
4	14	56	FALSE	FALSE	TRUE	FALSE
6	6	35	TRUE	TRUE	TRUE	FALSE
8	4	32	FALSE	FALSE	TRUE	FALSE
15	15	200	TRUE	TRUE	TRUE	TRUE
4	7	28	FALSE	FALSE	TRUE	TRUE
12	6	70	FALSE	TRUE	TRUE	FALSE
9	9	81	TRUE	FALSE	FALSE	FALSE