

# ARRAYINTERSECT Function

Generates an array containing all elements that appear in multiple input arrays, referenced as column names or array literals.

## Basic Usage

### Array literal reference example:

```
derive type:single value:ARRAYINTERSECT(["A","B","C"],["A","D","E"])
```

**Output:** Generates a single array with a single element:

```
["A"]
```

### Column reference example:

```
derive type:single value:ARRAYINTERSECT([array1,array2]) as:'intersect_Array'
```

**Output:** Generates a new `intersect_Array` column containing a single array listing all of the elements that appear in both `array1` and `array2` in order.

## Syntax and Arguments

```
derive type:single value:ARRAYINTERSECT(array_ref1,array_ref2)
```

Argument	Required?	Data Type	Description
array_ref1	Y	string or array	Name of first column or first array literal to apply to the function
array_ref2	Y	string or array	Name of second column or second array literal to apply to the function

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

### array\_ref1, array\_ref2

Array literal or name of the array column whose intersection you want to derive. You can intersect two or more array columns together.

### Usage Notes:

Required?	Data Type	Example Value
Yes	Array literal or column reference	myArray1, myArray2

## Examples

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

### Example - Simple intersection example

This simple example illustrates how the following functions operate on nested data.

- ARRAYCONCAT - Concatenate multiple arrays together. See *ARRAYCONCAT Function*.
- ARRAYINTERSECT - Find the intersection of elements between multiple arrays. See *ARRAYINTERSECT Function*.
- ARRAYCROSS - Compute the cross product of multiple arrays. See *ARRAYCROSS Function*.
- ARRAYUNIQUE - Generate unique values across multiple arrays. See *ARRAYUNIQUE Function*.

**Source:**

Code formatting has been applied to improve legibility.

Item	ArrayA	ArrayB
Item1	["A", "B", "C"]	["1", "2", "3"]
Item2	["A", "B"]	["A", "B", "C"]
Item3	["D", "E", "F"]	["4", "5", "6"]

**Transform:**

You can apply the following transforms in the following order. Note that the column names must be different from the transform name, which is a reserved word.

```
derive type:single value:ARRAYCONCAT([Letters,Numerals]) as:'concat2'
```

```
derive type:single value:ARRAYINTERSECT([Letters,Numerals]) as:'intersection2'
```

```
derive type:single value:ARRAYCROSS([Letters,Numerals]) as:'cross2'
```

```
derive type:single value:ARRAYUNIQUE([Letters,Numerals]) as:'unique2'
```

**Results:**

Item	ArrayA	ArrayB	concat2	intersection2	cross2	unique2
Item1	["A", "B", "C"]	["1", "2", "3"]	["A", "B", "C", "1", "2", "3"]	[ ]	[["A", "1"], ["A", "2"], ["A", "3"], ["B", "1"], ["B", "2"], ["B", "3"], ["C", "1"], ["C", "2"], ["C", "3"]]	["A", "B", "C", "1", "2", "3"]
Item2	["A", "B"]	["A", "B", "C"]	["A", "B", "A", "B", "C"]	["A", "B"]	[["A", "A"], ["A", "B"], ["A", "C"], ["B", "A"], ["B", "B"], ["B", "C"]]	["A", "B", "C"]

Item3	["D", "E", "F"]	["4", "5", "6"]	["D", "E", "F", "4", "5", "6"]	[ ]	[["D", "4"], ["D", "5"], ["D", "6"], ["E", "4"], ["E", "5"], ["E", "6"], ["F", "4"], ["F", "5"], ["F", "6"]]	["D", "E", "F", "4", "5", "6"]
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