

# Does a vector in R contain a given element?

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## RECOMMENDED CITATION

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The question "Does a vector in R contain a given element?" refers to determining whether a specific value or data point is present within a vector in the mathematical concept of real numbers (R). This inquiry is typically answered through a logical evaluation, where the vector is searched for the presence of the given element and a true or false statement is returned. This process is commonly used in mathematical and statistical analyses to determine the presence or absence of specific values within a dataset.

## Check if a Vector Contains a Given Element in R

You can use the following methods to check if a vector contains a given element in R:

### Method 1: Check if Vector Contains Element

```
'some_element' %in% my_vector
```

### Method 2: Find Position of First Occurrence of Element

```
match('some_element', my_vector)
```

### Method 3: Find Position of All Occurrences of Element

```
which('some_element' == my_vector)
```

The following examples show how to use each method in practice.

## Example 1: Check if Vector Contains Element

The following code shows how to check if 'Andy' exists in a given vector:

```
#create vector
my_vector <- c('Andy', 'Bert', 'Chad', 'Doug', 'Bert',
'Frank')

#check if vector contains 'Andy'
'Andy' %in% my_vector

TRUE
```

The output displays TRUE since the element 'Andy' does exist in the vector.

However, suppose we check if 'Arnold' exists in the vector:

```
#create vector
my_vector <- c('Andy', 'Bert', 'Chad', 'Doug', 'Bert',
'Frank')

#check if vector contains 'Arnold'
'Arnold' %in% my_vector
```

## FALSE

The output displays **FALSE** since the element 'Arnold' does not exist in the vector.

### Example 2: Find Position of First Occurrence of Element

The following code shows how to find the position of the first occurrence of 'Bert' in a given vector:

```
#create vector  
my_vector <- c('Andy', 'Bert', 'Chad', 'Doug', 'Bert',  
'Frank')
```

```
#find first occurrence of 'Bert'  
match('Bert', my_vector)
```

2

The output displays **2** since the element 'Bert' occurs first in position 2 of the vector.

And the following code shows how to find the position of the first occurrence of 'Carl' in the vector:

```
#create vector
```

```
my_vector <- c('Andy', 'Bert', 'Chad', 'Doug', 'Bert',  
'Frank')
```

```
#find first occurrence of 'Carl'
```

```
match('Carl', my_vector)
```

NA

The output displays NA since the element 'Carl' never occurs in the vector.

Example 3: Find Position of All Occurrences of Element

The following code shows how to find all occurrences of 'Bert' in a given vector:

```
#create vector
```

```
my_vector <- c('Andy', 'Bert', 'Chad', 'Doug', 'Bert',  
'Frank')
```

```
#find all occurrences of 'Bert'
```

```
which('Bert' == my_vector)
```

2 5

The output displays 2 and 5 since these are the

**positions in the vector where 'Bert' occurs.**

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