

How can I use the dim() function in R?

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The `dim()` function in R is a useful tool for obtaining the dimensions of a given object. It can be used to determine the number of rows and columns in a matrix, data frame, or array. By simply inputting the object name within the parentheses, the function will return the dimensions in the form of a vector. This information is particularly helpful when performing operations on data sets or when creating graphs and charts. The `dim()` function is a convenient way to quickly retrieve the dimensions of an object in R, making it a valuable tool for data analysis and visualization.

Use the dim() Function in R

The `dim()` function in R can be used to either get or set the dimensions of an array, matrix or data frame.

The following examples show how to use this function in practice.

Example 1: Use `dim()` to Get Dimensions of Data Frame

Suppose we have the following data frame in R:

```
#create data frame
```

```
df <- data.frame(team=c('A', 'B', 'C', 'D', 'E'),
```

```
points=c(99, 90, 86, 88, 95),
```

```
assists=c(33, 28, 31, 39, 34),
```

```
rebounds=c(30, 28, 24, 24, 28))
```

```
#view data frame
```

```
df
```

```
team points assists rebounds
```

```
1 A 99 33 30
2 B 90 28 28
3 C 86 31 24
4 D 88 39 24
5 E 95 34 28
```

We can use the dim() function to retrieve the number of rows and columns in the data frame:

```
#get dimensions of data frame
dim(df)
```

```
5 4
```

From the output we can see that the data frame has 5 rows and 4 columns.

Example 2: Use dim() to Get Dimensions of Matrix

Suppose we have the following matrix in R:

```
#create matrix
mat <- matrix(c(1, 4, 4, 8, 5, 4, 3, 8), nrow=4)

#view matrix
mat
```

1 5

4 4

4 3

8 8

We can use the dim() function to retrieve the number of rows and columns in the matrix:

```
#get dimensions of matrix
```

```
dim(mat)
```

4 2

From the output we can see that the matrix has 4 rows and 2 columns.

Example 3: Use dim() to Set Dimensions of Matrix

We can also use dim() to set the dimensions of a matrix:

```
#create vector of values
```

```
x <- c(1, 4, 4, 8, 5, 4, 3, 8)
```

```
#define dimensions for values
```

```
dim(x) <- c(4, 2)
```

```
#view result
```

```
x
```

```
1 5
```

```
4 4
```

```
4 3
```

```
8 8
```

```
#view class
```

```
class(x)
```

```
"matrix" "array"
```

Example 4: Use dim() to Get One Dimension

We can also use dim(x) and dim(x) to retrieve just the number of rows or just the number of columns of an object.

For example, suppose we have the following matrix:

```
#create matrix
```

```
x <- matrix(c(1, 4, 4, 8, 5, 4, 3, 8), nrow=4)
```

```
#view matrix
```

```
x
```

1 5

4 4

4 3

8 8

We can use dim(x) to only get the number of rows:

#display number of rows in matrix

dim(x)

4

And we can use dim(x) to only get the number of columns:

#display number of columns in matrix

dim(x)

2

Additional Resources