

How can I convert a character to numeric in R, and what are some examples of doing so?

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In R, there are several methods for converting a character to a numeric value. The most common approach is to use the `as.numeric()` function, which takes a character input and returns the numerical equivalent. Other options include using the `as.integer()` or `as.double()` functions, depending on the desired output type.

Examples of converting a character to numeric in R include converting a string of numbers, such as "123", to its numeric value of 123, or converting a string of letters, such as "ABC", to its ASCII numerical representation. Another example is converting a character vector containing multiple elements, such as "1", "2", and "3", to a numeric vector of 1, 2, and 3. It is important to note that if the character input cannot be converted to a numeric value, R will return an error.

Convert Character to Numeric in R (With Examples)

We can use the following syntax to convert a character vector to a numeric vector in R:

```
numeric_vector <- as.numeric(character_vector)
```

This tutorial provides several examples of how to use this function in practice.

Example 1: Convert a Vector from Character to Numeric

The following code shows how to convert a character vector to a numeric vector:

```
#create character vector  
chars <- c('12', '14', '19', '22', '26')  
  
#convert character vector to numeric vector
```

```
numbers <- as.numeric(chars)
```

```
#view numeric vector
```

```
numbers
```

```
12 14 19 22 26
```

```
#confirm class of numeric vector
```

```
class(numbers)
```

```
"numeric"
```

Example 2: Convert a Column from Character to Numeric

The following code shows how to convert a specific column in a data frame from character to numeric:

```
#create data frame
```

```
df <- data.frame(a = c('12', '14', '19', '22', '26'),
```

```
b = c(28, 34, 35, 36, 40))
```

```
#convert column 'a' from character to numeric
```

```
df$a <- as.numeric(df$a)
```

```
#view new data frame
```

```
df
```

a b

1 12 28

2 14 34

3 19 35

4 22 36

5 26 40

#confirm class of numeric vector

class(df\$a)

"numeric"

Example 3: Convert Several Columns from Character to Numeric

The following code shows how to convert all character columns in a data frame from character to numeric:

#create data frame

df <- data.frame(a = c('12', '14', '19', '22', '26'),

b = c('28', '34', '35', '36', '40'),

c = as.factor(c(1, 2, 3, 4, 5)),

d = c(45, 56, 54, 57, 59))

#display classes of each column

sapply(df, class)

a b c d

"character" "character" "factor" "numeric"

#identify all character columns

chars <- sapply(df, is.character)

#convert all character columns to numeric

df <- as.data.frame(apply(df, 2, as.numeric))

#display classes of each column

sapply(df, class)

a b c d

"numeric" "numeric" "factor" "numeric"

This code made the following changes to the data frame columns:

**Column a: From character to numeric
Column b: From character to numeric
Column c: Unchanged (since it was a factor)
Column d: Unchanged (since it was already numeric)**

By using the and functions, we were able to convert only the character columns to numeric columns and leave all other columns unchanged.