

# What does the error “non-numeric argument to binary operator” mean when using the function Fix in R?

Authored by  
**stats writer**

May 4, 2024

## RECOMMENDED CITATION

stats writer (2024). *What does the error “non-numeric argument to binary operator” mean when using the function Fix in R?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=142721>

The error "non-numeric argument to binary operator" in R refers to an issue with the function `Fix`, which is used to modify and correct data in a dataset. This error occurs when the `Fix` function is applied to a non-numeric data type, such as a character or logical value, instead of a numeric value. This means that the `Fix` function can only be used on numeric data and will not work on other types of data. To resolve this error, the non-numeric data must be converted to a numeric type before applying the `Fix` function.

## Fix in R: non-numeric argument to binary operator

One error you may encounter in R is:

**Error in `df$var1 - df$var2`: non-numeric argument to binary operator**

This error occurs when you attempt to perform some on two vectors and one of the vectors is non-numeric.

Examples of binary operations include:

Subtraction (-) Addition (+) Multiplication (\*) Division (/)

This error occurs most often when one of the vectors you provide is a character vector.

This tutorial shares exactly how to fix this error.

How to Reproduce the Error

Suppose we have the following data frame in R:

```
#create data frame
```

```
df <- data.frame(period = c(1, 2, 3, 4, 5, 6, 7, 8),  
sales = c(14, 13, 10, 11, 19, 9, 8, 7),  
returns = c('1', '0', '2', '1', '1', '2', '2', '3'))
```

```
#view data frame
```

```
df
```

```
period sales returns
```

```
1 1 14 1
```

```
2 2 13 0
```

```
3 3 10 2
```

```
4 4 11 1
```

```
5 5 19 1
```

```
6 6 9 2
```

```
7 7 8 2
```

```
8 8 7 3
```

Now suppose we attempt to create a new column called 'net' by subtracting the 'returns' column from the 'sales' column:

```
#attempt to create new column called 'net'
```

```
df$net <- df$sales - df$returns
```

## Error in df\$sales \* df\$returns : non-numeric argument to binary operator

An error occurs because the 'returns' column is of the class 'character' and it's not possible to subtract a character column from a numeric column.

```
#display class of 'sales' column  
class(df$sales)
```

```
"numeric"
```

```
#display class of 'returns' column  
class(df$returns)
```

```
"character"
```

How to Fix the Error

The way to fix this error is to use `as.numeric()` to convert the 'returns' column to numeric before performing the subtraction:

```
#create new column called 'net'  
df$net <- df$sales - as.numeric(df$returns)
```

```
#view updated data frame
```

```
df
```

```
period sales returns net
```

```
1 1 14 1 13
```

```
2 2 13 0 13
```

```
3 3 10 2 8
```

```
4 4 11 1 10
```

```
5 5 19 1 18
```

```
6 6 9 2 7
```

```
7 7 8 2 6
```

```
8 8 7 3 4
```

**The following tutorials explain how to troubleshoot other common errors in R:**

**[How to Fix in R: longer object length is not a multiple of shorter object length](#)**