

How can I calculate the number of months between two dates in R?

Authored by
stats writer

June 28, 2024

RECOMMENDED CITATION

stats writer (2024). *How can I calculate the number of months between two dates in R?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=156803>

In R, there are several ways to calculate the number of months between two dates. One way is to use the "difftime" function, which calculates the difference between two dates in a specified unit. By specifying the unit as "months", the function will return the number of months between the two dates. Another method is to convert the dates into a "Date" class object and then use the minus sign to calculate the difference, again specifying the unit as "months". Additionally, the "lubridate" package has a "time_length" function which can also be used to calculate the number of months between two dates. Whichever method is chosen, it is important to ensure that the dates are in the correct format and that the results are interpreted accurately.

Calculate Number of Months Between Dates in R

You can use one of the following two methods to calculate the number of months between two dates in R:

Method 1: Calculate Number of Whole Months Between Dates

```
library(lubridate)
```

```
interval(first_date, second_date) %/% months(1)
```

Method 2: Calculate Number of Partial Months (With Decimal Places) Between Dates

```
library(lubridate)
```

```
interval(first_date, second_date) %/% days(1) / (365/12)
```

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

Example 1: Calculate Number of Whole Months Between Dates

We can use the following code to calculate the number of whole months between two dates in R:

```
library(lubridate)  
  
#define dates  
first_date <- as.Date('2022-05-01')  
second_date <- as.Date('2022-09-04')  
  
#calculate difference between dates in months  
diff <- interval(first_date, second_date) %/% months(1)  
  
#view difference  
diff  
  
4
```

We can see that there are four whole months between the two dates that we specified.

Example 2: Calculate Number of Partial Months Between Dates

We can use the following code to calculate the number of partial months between two dates in R:

```
library(lubridate)
```

```
#define dates
```

```
first_date <- as.Date('2022-05-01')
```

```
second_date <- as.Date('2022-09-04')
```

```
#calculate difference between dates in partial months
```

```
diff <- interval(first_date, second_date) %/% days(1) /  
(365/12)
```

```
#view difference
```

```
diff
```

```
4.142466
```

We can see that there are 4.142466 months between the two dates that we specified.

Note how this method is more specific than the previous method because it tells us the number of partial months between the dates as well.

Depending on your situation, you may prefer to use one

of these methods over the other.

Note: Both methods use functions from the package in R. If you don't already have this package installed, you can run the following in your R console:

```
install.packages('lubridate')
```

You can also find the complete documentation for the `interval()` function we used .

Additional Resources

The following tutorials explain how to perform other common tasks in R: