

How can I convert an Excel date format to a proper date in R?

Authored by
stats writer

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Converting an Excel date format to a proper date in R is a simple but important task for data analysis. Excel often stores dates as serial numbers, making it difficult to interpret them correctly in R. To convert the date format, one can use the `as.Date()` function in R, specifying the format of the Excel date. This will convert the serial number into a proper date, allowing for accurate analysis and visualization of the data. It is an essential step for anyone working with dates in R and ensures the accuracy and reliability of the results.

Convert Excel Date Format to Proper Date in R

You can use the following methods to convert Excel dates that are formatted as numbers into proper dates in R:

Method 1: Convert Excel Number to Proper Date in R

```
df$date <- as.Date(df$date, origin = "1899-12-30")
```

Method 2: Convert Excel Number to Proper Datetime in R

```
library(openxlsx)
```

```
df$datetime <- convertToDateTime(df$datetime)
```

The following examples show how to use each method in practice with an Excel file called `sales_data.xlsx` that contains the following data:

| | A | B | C | D | E | F |
|----|----------|----------|-------|---|---|---|
| 1 | date | datetime | sales | | | |
| 2 | 44563.00 | 44563.18 | 14 | | | |
| 3 | 44566.00 | 44566.51 | 19 | | | |
| 4 | 44635.00 | 44635.65 | 22 | | | |
| 5 | 44670.00 | 44670.41 | 29 | | | |
| 6 | 44706.00 | 44706.44 | 24 | | | |
| 7 | 44716.00 | 44716.43 | 25 | | | |
| 8 | 44761.00 | 44761.05 | 25 | | | |
| 9 | 44782.00 | 44782.09 | 30 | | | |
| 10 | 44864.00 | 44864.19 | 35 | | | |
| 11 | 44919.00 | 44919.89 | 28 | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |

Example 1: Convert Excel Number to Proper Date in R

The following code shows how to use the `as.Date()` function in base R to convert the numeric values in the date column of the Excel file into proper dates in R:

```
library(readxl)
```

```
#import Excel file into R as data frame
```

```
df
```

```
<-
```

```
read_excel("C:UsersbobDocumentssales_data.xlsx")
```

```
#view data frame
```

```
df
```

```
# A tibble: 10 x 3
```

```
date datetime sales
```

```
1 44563 44563. 14
```

```
2 44566 44567. 19
```

```
3 44635 44636. 22
```

```
4 44670 44670. 29
```

```
5 44706 44706. 24
```

```
6 44716 44716. 25
```

```
7 44761 44761. 25
```

```
8 44782 44782. 30
```

```
9 44864 44864. 35
```

```
10 44919 44920. 28
```

```
#convert Excel number format to proper R date
```

```
df$date <- as.Date(df$date, origin = "1899-12-30")
```

```
#view updated data frame
```

```
df
```

```
# A tibble: 10 x 3
```

```
date datetime sales
```

1 2022-01-02 44563. 14
2 2022-01-05 44567. 19
3 2022-03-15 44636. 22
4 2022-04-19 44670. 29
5 2022-05-25 44706. 24
6 2022-06-04 44716. 25
7 2022-07-19 44761. 25
8 2022-08-09 44782. 30
9 2022-10-30 44864. 35
10 2022-12-24 44920. 28

Notice that the values in the date column are now formatted as proper dates.

Example 2: Convert Excel Number to Proper Datetime in R

The following code shows how to use the `convertToDateTime()` function from the `openxlsx` package in R to convert the numeric values in the datetime column of the Excel file into proper datetimes in R:

```
library(readxl)  
library(openxlsx)
```

```
#import Excel file into R as data frame
```

```
df
```

```
<-
```

```
read_excel("C:UsersbobDocumentssales_data.xlsx")
```

```
#view data frame
```

```
df
```

```
# A tibble: 10 x 3
```

```
date datetime sales
```

```
1 44563 44563. 14
```

```
2 44566 44567. 19
```

```
3 44635 44636. 22
```

```
4 44670 44670. 29
```

```
5 44706 44706. 24
```

```
6 44716 44716. 25
```

```
7 44761 44761. 25
```

```
8 44782 44782. 30
```

```
9 44864 44864. 35
```

```
10 44919 44920. 28
```

```
#convert Excel datetime to proper datetime in R
```

```
df$datetime <- convertToDateTime(df$datetime)
```

```
#view updated data frame
```

df

A tibble: 10 x 3

date datetime sales

```
1 44563 2022-01-02 04:14:00 14
2 44566 2022-01-05 12:15:00 19
3 44635 2022-03-15 15:34:00 22
4 44670 2022-04-19 09:45:00 29
5 44706 2022-05-25 10:30:00 24
6 44716 2022-06-04 10:15:00 25
7 44761 2022-07-19 01:13:00 25
8 44782 2022-08-09 02:15:00 30
9 44864 2022-10-30 04:34:00 35
10 44919 2022-12-24 21:23:00 28
```

Notice that the values in the datetime column are now formatted as proper dates.

Note: You can also use the `convertToDate()` function from the `openxlsx` package to convert a numeric date to a proper date in R.