

What is the function in R that can be used to find the Chi-Square Critical Value?

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The Chi-Square Critical Value is a mathematical concept used in statistical analysis to determine the significance of data. In the programming language R, the function "qchisq()" can be utilized to find the Chi-Square Critical Value. This function takes in the desired level of confidence and the degrees of freedom as parameters, and returns the corresponding critical value. It is a useful tool for evaluating the validity of statistical tests and making informed decisions based on the results. By using the "qchisq()" function, users can easily and accurately calculate the Chi-Square Critical Value, aiding in the analysis and interpretation of data.

Find the Chi-Square Critical Value in R

When you conduct a Chi-Square test, you will get a test statistic as a result.

To determine if the results of the Chi-Square test are statistically significant, you can compare the test statistic to a Chi-Square critical value.

If the test statistic is greater than the Chi-Square critical value, then the results of the test are statistically significant.

The Chi-Square critical value can be found by using a or by using statistical software.

To find the Chi-Square critical value, you need:

A significance level (common choices are 0.01, 0.05, and 0.10) Degrees of freedom

Using these two values, you can determine the Chi-Square value to be compared with the test statistic.

How to Find the Chi-Square Critical Value in R

To find the Chi-Square critical value in R, you can use the `qchisq()` function, which uses the following syntax:

```
qchisq(p, df, lower.tail=TRUE)
```

where:

p: The significance level to use
df: The degrees of freedom
lower.tail: If TRUE, the probability to the left of p in the F distribution is returned. If FALSE, the probability to the right is returned. Default is TRUE.

This function returns the critical value from the Chi-Square distribution based on the significance level and degrees of freedom provided.

For example, suppose we would like to find the Chi-Square critical value for a significance level of 0.05 and degrees of freedom = 11.

```
#find Chi-Square critical value
```

```
qchisq(p=.05, df=11, lower.tail=FALSE)
```

19.67514

The Chi-Square critical value for a significance level of 0.05 and degrees of freedom = 11 is 19.67514.

Thus, if we're conducting some type of Chi-Square test then we can compare the Chi-Square test statistic to 19.67514.

Note that smaller values of alpha will lead to larger Chi-Square critical values. For example, consider the Chi-Square critical value for a significance level of 0.01, and degrees of freedom = 11.

```
#find Chi-Square critical value
```

```
qchisq(p=.01, df=11, lower.tail=FALSE)
```

24.72497

And consider the Chi-Square critical value with the exact same degrees of freedom, but with a significance level of 0.005:

#find Chi-Square critical value

qchisq(p=.005, df=11, lower.tail=FALSE)

26.75685

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