

R-Code for the T-Distribution:

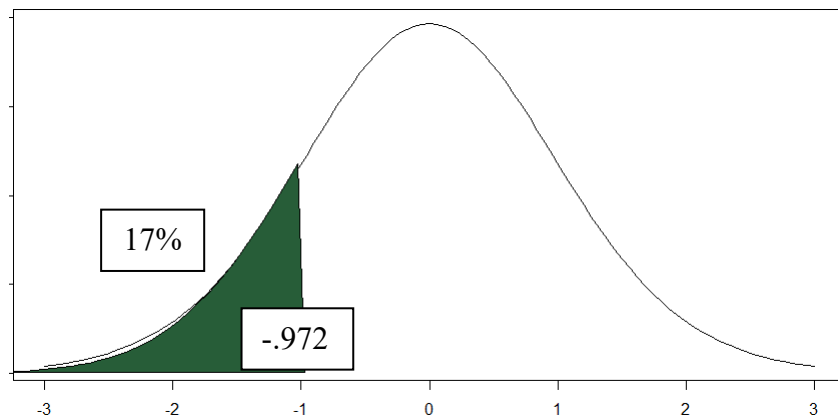
PT:

Input: `pt(t-statistic, degrees of freedom)`

Output: the area to the LEFT of the t-statistic

Example: Find the percentage of points that fall below a t-score of -0.972 , with 19 degrees of freedom.

$$\text{pt}(-.972, 19) = 0.17$$



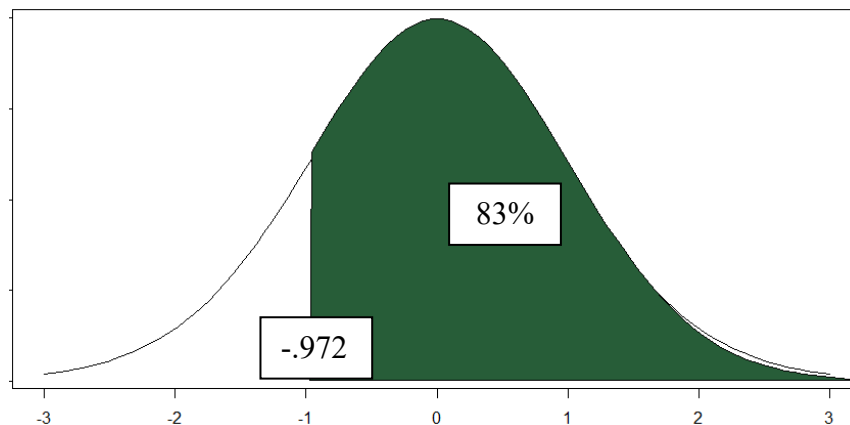
**If you want the area to the RIGHT

`pt(t-statistic, degrees of freedom, lower.tail=FALSE)`

`1-pt(t-statistic, degrees of freedom)`

Example: Find the area above a t-statistic with a value of -0.972 and 19 degrees of freedom

$$\text{pt}(-.972, 19, \text{lower.tail}=\text{FALSE}) = .83$$



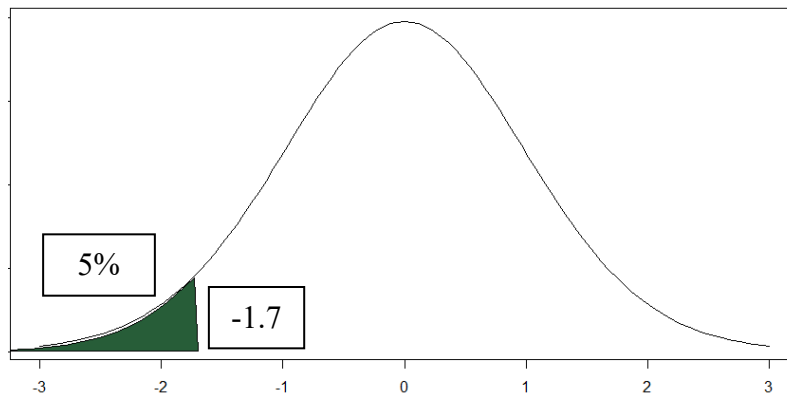
QT:

Input: qt(critical value, degrees of freedom)

Output: t-score

Example: What is the t-score for $\alpha = .05$ with 29 degrees of freedom?

$$\mathbf{qt(.05, df=29) = -1.7}$$



**To adjusting qt for a two tailed test- divide alpha by 2

$$\mathbf{qt(.025, df=29) = -2.05}$$

$$\mathbf{qt(.0975, df=29) = 2.05}$$

