

# How can I use the FINV function in SAS? Can you provide some examples?

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The FINV function in SAS is a built-in statistical function that calculates the inverse of the cumulative distribution function for a given probability distribution. This function is useful in various statistical analyses, such as determining critical values for hypothesis testing or calculating confidence intervals.

To use the FINV function in SAS, you need to specify the distribution type and the probability value for which you want to calculate the inverse. The syntax for using the FINV function is as follows:

```
FINV(probability, distribution_type)
```

Some examples of using the FINV function in SAS include finding the critical value for a one-tailed t-test with a significance level of 0.05, or calculating the upper and lower bounds of a 95% confidence interval for a normal distribution.

In summary, the FINV function in SAS is a powerful tool for statistical analysis and can be used in various scenarios to calculate the inverse of a given probability distribution. Its flexibility and ease of use make it a valuable function for researchers and analysts.

## Use the FINV Function in SAS (With Examples)

**You can use the FINV function in SAS to find critical values from the F distribution.**

**This function uses the following basic syntax:**

```
FINV(p, ndf, ddf)
```

**where:**

**p: 1 - the significance level**  
**ndf: The numerator degrees of freedom**  
**ddf: The denominator degrees of freedom**

**The following example shows how to use the FINV**

## function in practice to calculate F critical values.

### Example: How to Use FINV Function in SAS to Calculate F Critical Values

Suppose we would like to find the F critical value for a significance level of 0.05, numerator degrees of freedom = 6, and denominator degrees of freedom = 8.

We can use the FINV function to calculate this value:

```
/*create dataset that contains F critical value*/  
data my_data;  
critical_val=finv(.95, 6, 8);  
put critical_val=;  
run;  
  
/*view results*/  
proc printdata=my_data;
```

Obs	critical_val
1	3.58058

The F critical value for a significance level of 0.05, numerator degrees of freedom = 6, and denominator

**degrees of freedom = 8 is 3.58058.**

**Thus, if we're conducting some type of F test then we can compare the F test statistic to 3.58058.**

**If the F statistic is greater than 3.58058, then the results of the test are statistically significant.**

**It's worth noting that smaller values for the significance level will lead to larger F critical values.**

**For example, consider the F critical value for a significance level of 0.01, numerator degrees of freedom = 6, and denominator degrees of freedom = 8:**

```
/*create dataset that contains F critical value*/
```

```
data my_data;  
critical_val=finv(.99, 6, 8);  
put critical_val=;  
run;
```

```
/*view results*/
```

```
proc printdata=my_data;
```

**The F critical value for a significance level of 0.05, numerator degrees of freedom = 6, and denominator**

**degrees of freedom = 8 is 6.37068.**

**Note: You can also use the to find critical values by hand. The values that you find in the table will match the ones calculated by the FINV function in SAS.**

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

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