

# How can I use the PROC MEANS statement with the CLASS statement to perform a SAS analysis?

Authored by  
**stats writer**

June 23, 2024

## RECOMMENDED CITATION

stats writer (2024). *How can I use the PROC MEANS statement with the CLASS statement to perform a SAS analysis?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=147856>

The PROC MEANS statement, along with the CLASS statement, is a useful tool for performing SAS analysis. This statement allows for the calculation of descriptive statistics, such as mean, median, and standard deviation, for variables within different classes or groups. By specifying the CLASS statement, the data can be divided into distinct categories, and the PROC MEANS statement can then calculate statistics for each category separately. This allows for a more detailed and comprehensive analysis, as it provides insights into the relationship between variables and different groups. Overall, using the PROC MEANS statement with the CLASS statement is an efficient and effective way to perform a SAS analysis.

## **SAS: Use PROC MEANS with CLASS Statement**

**You can use PROC MEANS to calculate summary statistics for each numeric variable in a dataset in SAS.**

**You can also use the CLASS statement within PROC MEANS to calculate summary statistics, grouped by one or more categorical variables.**

**The following examples show how to use the CLASS statement in practice with the following dataset in SAS that contains information about various basketball players:**

```
/*create dataset*/  
data my_data;  
input team $ position $ points assists;  
datalines;  
A Guard 14 4
```

```
A Guard 22 6  
A Guard 24 9  
A Forward 13 8  
A Forward 13 9  
A Guard 10 5  
B Guard 24 4  
B Guard 22 6  
B Forward 34 2  
B Forward 15 5  
B Forward 23 5  
B Guard 10 4  
;  
run;  
  
/*view dataset*/  
proc printdata=my_data;
```

Obs	team	position	points	assists
1	A	Guard	14	4
2	A	Guard	22	6
3	A	Guard	24	9
4	A	Forward	13	8
5	A	Forward	13	9
6	A	Guard	10	5
7	B	Guard	24	4
8	B	Guard	22	6
9	B	Forward	34	2
10	B	Forward	15	5
11	B	Forward	23	5
12	B	Guard	10	4

### Example 1: Using PROC MEANS without CLASS Statement

The following code shows how to use PROC MEANS without the CLASS statement:

```
/*calculate summary statistics for numeric variables*/
proc means data=my_data;
run;
```

The MEANS Procedure

Variable	N	Mean	Std Dev	Minimum	Maximum
points	12	18.6666667	7.2780284	10.0000000	34.0000000
assists	12	5.5833333	2.1514618	2.0000000	9.0000000

**By default, PROC MEANS produces summary statistics for each numeric variable in the dataset.**

### **Example 2: Using PROC MEANS with One Variable in CLASS Statement**

The following code shows how to use PROC MEANS with the CLASS statement to specify that summary statistics should be computed for the numeric variables, grouped by the team variable:

```
/*calculate summary statistics for numeric variables,  
grouped by team*/  
proc means data=my_data;  
class team;  
run;
```

**The MEANS Procedure**

<b>team</b>	<b>N Obs</b>	<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std Dev</b>	<b>Minimum</b>	<b>Maximum</b>
A	6	points	6	16.0000000	5.6213877	10.0000000	24.0000000
		assists	6	6.8333333	2.1369761	4.0000000	9.0000000
B	6	points	6	21.3333333	8.2381228	10.0000000	34.0000000
		assists	6	4.3333333	1.3662601	2.0000000	6.0000000

**The output now shows the summary statistics for each numeric variable, grouped by the unique values in the team column.**

For example, the first row in the output shows the summary statistics for the points variable only for the players on team A.

### Example 3: Using PROC MEANS with Multiple Variables in CLASS Statement

```
/*calculate summary statistics for numeric variables,
grouped by team and position*/
proc means data=my_data;
class team position;
run;
```

**The MEANS Procedure**

team	position	N Obs	Variable	N	Mean	Std Dev	Minimum	Maximum
A	Forward	2	points	2	13.0000000	0	13.0000000	13.0000000
			assists	2	8.5000000	0.7071068	8.0000000	9.0000000
	Guard	4	points	4	17.5000000	6.6080759	10.0000000	24.0000000
			assists	4	6.0000000	2.1602469	4.0000000	9.0000000
B	Forward	3	points	3	24.0000000	9.5393920	15.0000000	34.0000000
			assists	3	4.0000000	1.7320508	2.0000000	5.0000000
	Guard	3	points	3	18.6666667	7.5718778	10.0000000	24.0000000
			assists	3	4.6666667	1.1547005	4.0000000	6.0000000

The output now shows the summary statistics for each numeric variable, grouped by the unique values in the team and position columns.

For example, the first row in the output shows the

**summary statistics for the points variable only for the players on team A in a position of Forward.**

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

ARABPSYCHOLOGY.COM