

How can I calculate the sum by group in SAS?

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July 1, 2024

RECOMMENDED CITATION

stats writer (2024). *How can I calculate the sum by group in SAS?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=164711>

Calculating the sum by group in SAS refers to the process of obtaining the total value of a specific variable within different subgroups or categories of data. This can be achieved by using the "SUM" function in SAS, which allows for the aggregation of data within a specific group or category. By specifying the variable and the group identifier, SAS will calculate the sum of the variable for each group, providing a summary of the data. This method is useful for analyzing and understanding the distribution of data within different groups, and can aid in making informed decisions and identifying patterns in the data.

Calculate the Sum by Group in SAS

You can use the following methods to calculate the sum of values by group in SAS:

Method 1: Calculate Sum by One Group

```
proc sql;  
select var1, sum(var2) as sum_var2  
from my_data  
group by var1;  
quit;
```

Method 2: Calculate Sum by Multiple Groups

```
proc sql;  
select var1, var2, sum(var3) as sum_var3  
from my_data  
group by var1, var2;
```

quit;

The following examples show how to use each method with the following dataset in SAS:

```
/*create dataset*/
```

```
data my_data;
```

```
input team $ position $ points;
```

```
datalines;
```

```
A Guard 15
```

```
A Guard 12
```

```
A Guard 29
```

```
A Forward 13
```

```
A Forward 9
```

```
A Forward 16
```

```
B Guard 25
```

```
B Guard 20
```

```
B Guard 34
```

```
B Forward 19
```

```
B Forward 3
```

```
B Forward 8
```

```
;
```

```
run;
```

```
/*view dataset*/  
proc printdata=my_data;
```

Obs	team	position	points
1	A	Guard	15
2	A	Guard	12
3	A	Guard	29
4	A	Forward	13
5	A	Forward	9
6	A	Forward	16
7	B	Guard	25
8	B	Guard	20
9	B	Guard	34
10	B	Forward	19
11	B	Forward	3
12	B	Forward	8

Example 1: Calculate Sum by One Group

The following code shows how to calculate the sum of points by team:

```
/*calculate sum of points by team*/  
proc sql;  
select team, sum(points) as sum_points  
from my_data  
group by team;  
quit;
```

team	sum_points
A	94
B	109

From the output we can see that players on team A scored a total of 94 points and players on team B scored a total of 109 points.

Example 2: Calculate Sum by Multiple Groups

The following code shows how to calculate the sum of points, group by team and position:

```
/*calculate sum of points by team, grouped by team and  
position*/  
proc sql;  
select team, position, sum(points) as sum_points  
from my_data  
group by team, position;  
quit;
```

team	position	sum_points
A	Forward	38
A	Guard	56
B	Forward	30
B	Guard	79

Additional Resources

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

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