

How can I create a scatter plot matrix in SAS?

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A scatter plot matrix is a graphical tool used to display the relationship between multiple variables in a dataset. In SAS, this can be achieved by using the PROC SGSCATTER procedure. This procedure allows users to create a matrix of scatter plots where each variable is plotted against every other variable in the dataset. By specifying the variables of interest, users can generate a visual representation of the correlation or pattern between them. This can be useful in identifying any potential trends or outliers in the data. Additionally, the PROC SGSCATTER procedure offers options for customizing the appearance and labeling of the scatter plot matrix. Overall, using the PROC SGSCATTER procedure in SAS allows for the creation of a comprehensive scatter plot matrix that aids in understanding the relationships between variables in a dataset.

Create a Scatter Plot Matrix in SAS

A scatter plot matrix is exactly what it sounds like - a matrix of scatterplots.

This type of matrix is useful because it allows you to visualize the relationship between multiple variables in a dataset at once.

You can use the following basic syntax to create a scatter plot matrix in SAS:

```
proc sgscatter data=my_data;  
matrix var1 var2 var3;  
run;
```

This particular syntax creates a scatter plot matrix for the variables var1, var2, and var3 in the dataset called

my_data.

The following example shows how to use this syntax in practice.

Example: Create Scatter Plot Matrix in SAS

Suppose we have the following dataset in SAS:

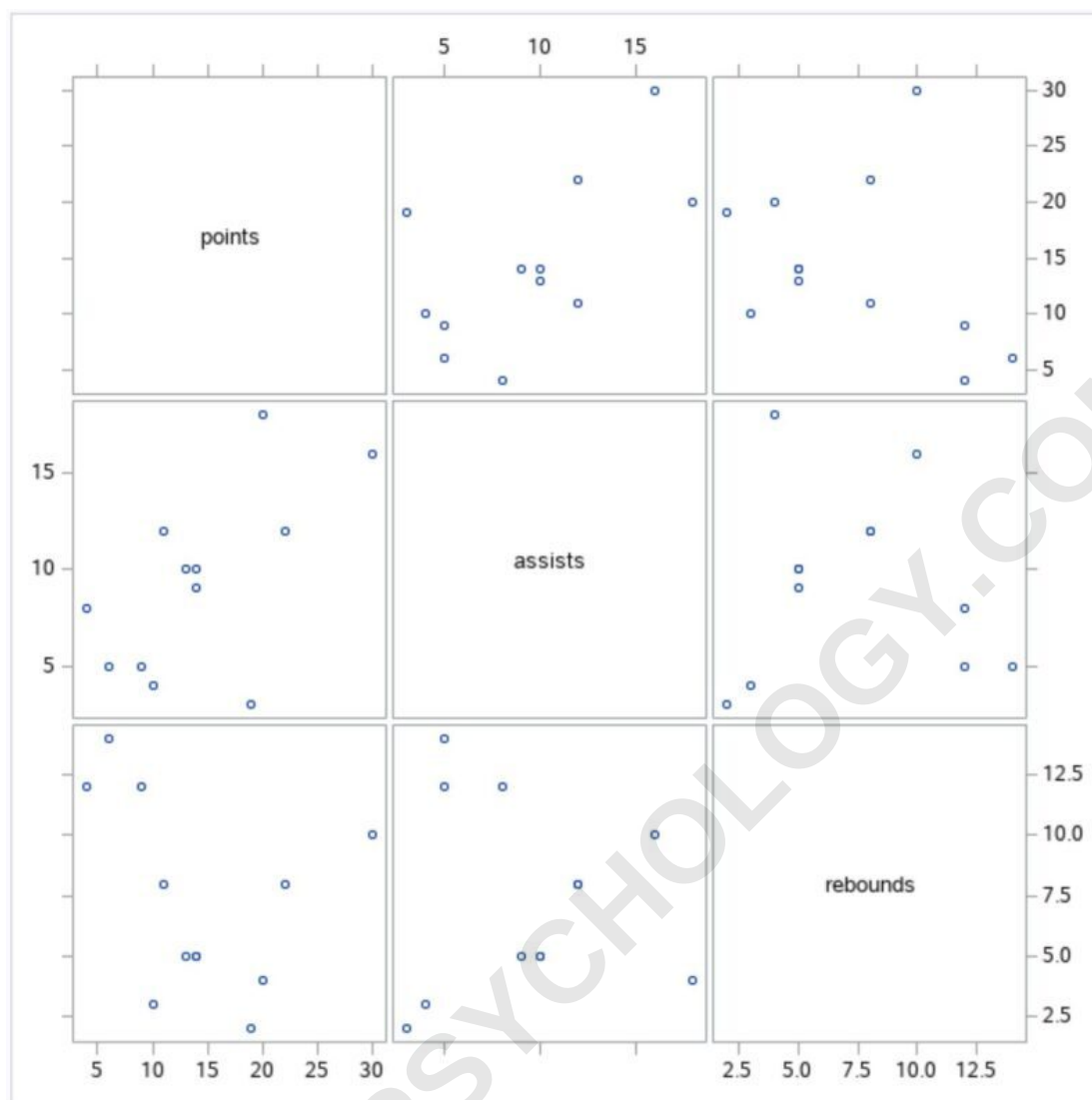
```
/*create dataset*/  
data my_data;  
input team $ points assists rebounds;  
datalines;  
A 22 12 8  
A 20 18 4  
A 14 9 5  
A 30 16 10  
B 10 4 3  
B 9 5 12  
B 6 5 14  
B 14 10 5  
C 4 8 12  
C 13 10 5  
C 11 12 8  
C 19 3 2
```

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

Obs	team	points	assists	rebounds
1	A	22	12	8
2	A	20	18	4
3	A	14	9	5
4	A	30	16	10
5	B	10	4	3
6	B	9	5	12
7	B	6	5	14
8	B	14	10	5
9	C	4	8	12
10	C	13	10	5
11	C	11	12	8
12	C	19	3	2

We can use the following syntax to create a scatter plot to visualize the relationship between the points, assists, and rebounds variables:

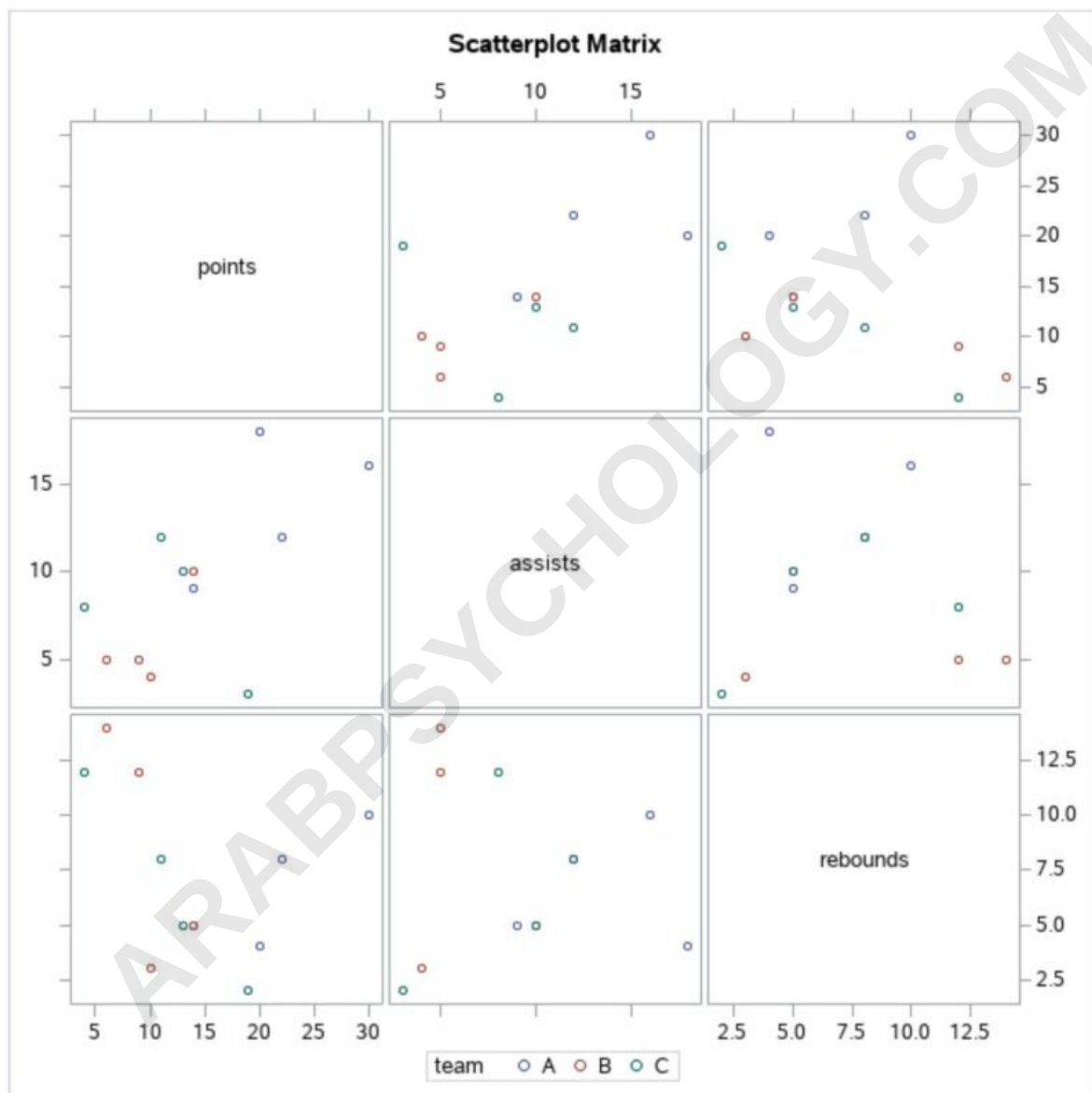
```
/*create scatter plot matrix*/  
proc sgscatterdata=my_data;  
matrix points assists rebounds;  
run;
```



Note that we can also use the title function to add a title to the overall matrix and the group function to color the points in the plot based on the value for the team variable:

```
/*create scatter plot matrix with points colored by team*/  
proc sgscatter data=my_data;  
title "Scatterplot Matrix";
```

```
matrix points assists rebounds / group=team;  
run;  
title;
```



The scatter plot matrix now has a title and the points in each scatter plot are colored based on their team value.