

How can I create a scatterplot in R with multiple variables?

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Creating a scatterplot in R with multiple variables involves using the "plot" function to plot two or more variables against each other on a two-dimensional graph. This allows for visualizing the relationship between the variables and identifying any patterns or trends. In order to create a scatterplot with multiple variables, one must first import the data into R, then use the "plot" function with the desired variables as the x and y axes. Additional features such as labels, colors, and titles can be added to enhance the clarity of the plot. With the proper use of R syntax and functions, one can easily generate a scatterplot with multiple variables for data analysis and visualization purposes.

Create a Scatterplot in R with Multiple Variables

You can use the following basic syntax to create a scatterplot with multiple variables in R:

```
#create scatterplot of x1 vs. y1
```

```
plot(x1, y1, col='red')
```

```
#add scatterplot of x2 vs. y2
```

```
points(x2, y2, col='blue')
```

```
#add legend
```

```
legend(1, 25, legend=c('Data 1', 'Data 2'), pch=c(19, 19),  
col=c('red', 'blue'))
```

The following examples show how to use this syntax in practice.

Example 1: Create Scatterplot with Two Variables

The following code shows how to create a scatterplot with two different variables:

```
#define datasets
```

```
x1 = c(1, 3, 6, 11, 19, 20)
```

```
y1 = c(7, 10, 11, 12, 18, 25)
```

```
x2 = c(1, 3, 8, 13, 17, 19)
```

```
y2 = c(9, 15, 18, 21, 22, 22)
```

```
#create scatterplot of x1 vs. y1
```

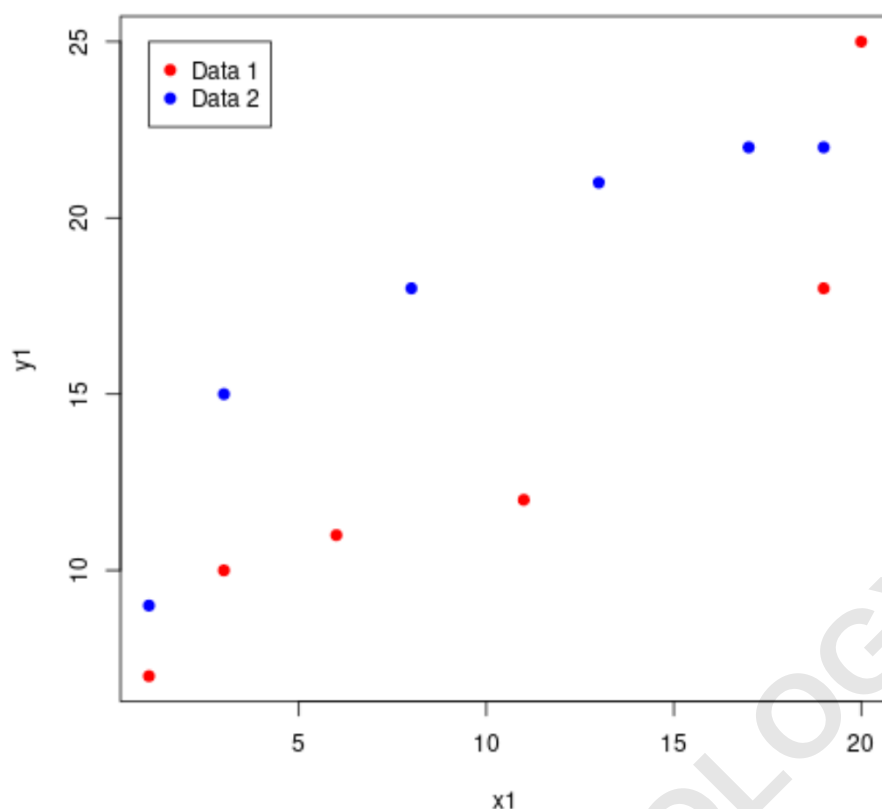
```
plot(x1, y1, col='red', pch=19)
```

```
#add scatterplot of x2 vs. y2
```

```
points(x2, y2, col='blue', pch=19)
```

```
#add legend
```

```
legend(1, 25, legend=c('Data 1', 'Data 2'), pch=c(19, 19),  
col=c('red', 'blue'))
```



Example 2: Customize the Scatterplot

The following code shows how to customize the axes labels, title, and size of the points in the plot:

#define datasets

x1 = c(1, 3, 6, 11, 19, 20)

y1 = c(7, 10, 11, 12, 18, 25)

x2 = c(1, 3, 8, 13, 17, 19)

y2 = c(9, 15, 18, 21, 22, 22)

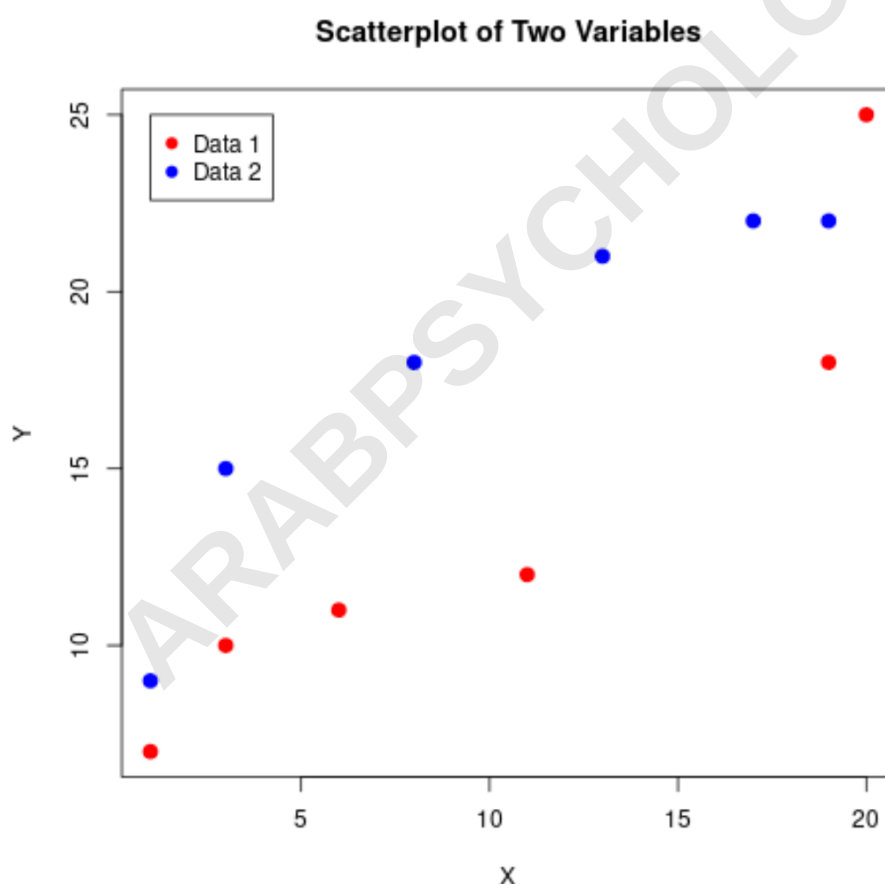
#create scatterplot of x1 vs. y1

```
plot(x1, y1, col='red', pch=19, cex=1.3,  
xlab='X', ylab='Y', main='Scatterplot of Two Variables')
```

```
#overlay scatterplot of x2 vs. y2  
points(x2, y2, col='blue', pch=19, cex=1.3)
```

```
#add legend
```

```
legend(1, 25, legend=c('Data 1', 'Data 2'), pch=c(19, 19),  
col=c('red', 'blue'))
```



Note that the pch argument specifies the shape of the

points in the plot. A pch value of 19 specifies a filled-in circle.

You can find a complete list of pch values and their corresponding shapes .

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