How can the scale_y_continuous function be utilized in ggplot2 to adjust the y-axis scale? Can you provide some examples?

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The scale_y_continuous function is a powerful tool in ggplot2 that allows users to adjust the scale of the y-axis in their graphs. This function can be utilized by specifying the desired range of values for the y-axis, as well as any other desired formatting options, such as labels and breaks.

For example, if we have a scatter plot with y-values ranging from 0 to 100, but we want to focus on the data points between 20 and 80, we can use scale_y_continuous to set the y-axis limits to 20 and 80. This will zoom in on the relevant data and make it easier to analyze.

Another way to use scale_y_continuous is to adjust the axis breaks and labels. For instance, if our y-values are in millions, we can use the function to set breaks at every million and add a "M" label to the end of each number. This allows for a more concise and understandable presentation of the data.

Overall, the scale_y_continuous function is a versatile tool that allows for customization of the y-axis scale in ggplot2. By specifying the desired range, breaks, and labels, users can effectively adjust the y-axis to best represent their data and enhance their visualizations.

Use scale_y_continuous in ggplot2 (With Examples)

You can use the scale_y_continuous() function in ggplot2 to customize the y-axis of a given plot.

This function uses the following basic syntax:

p +
scale_y_continuous(breaks, n.breaks, labels, limits, ...)

where:

breaks: A numeric vector of positions for breaks on the y-axisn.breaks: An integer vector specifying the number of total breaks on the y-axislabels: A character vector of

labels to use for the y-axislimits: A numeric vector that specifies the min and max value for the y-axis

The following examples show how to use this function in different scenarios with the following data frame in R:

```
#create data frame
df <- data.frame(points=c(5, 7, 12, 13, 15, 19, 22, 25),
assists=c(4, 3, 2, 3, 7, 8, 5, 7))

#view data frame
df

points assists
1 5 4
2 7 3
3 12 2
4 13 3
5 15 7
6 19 8
7 22 5
8 25 7
```

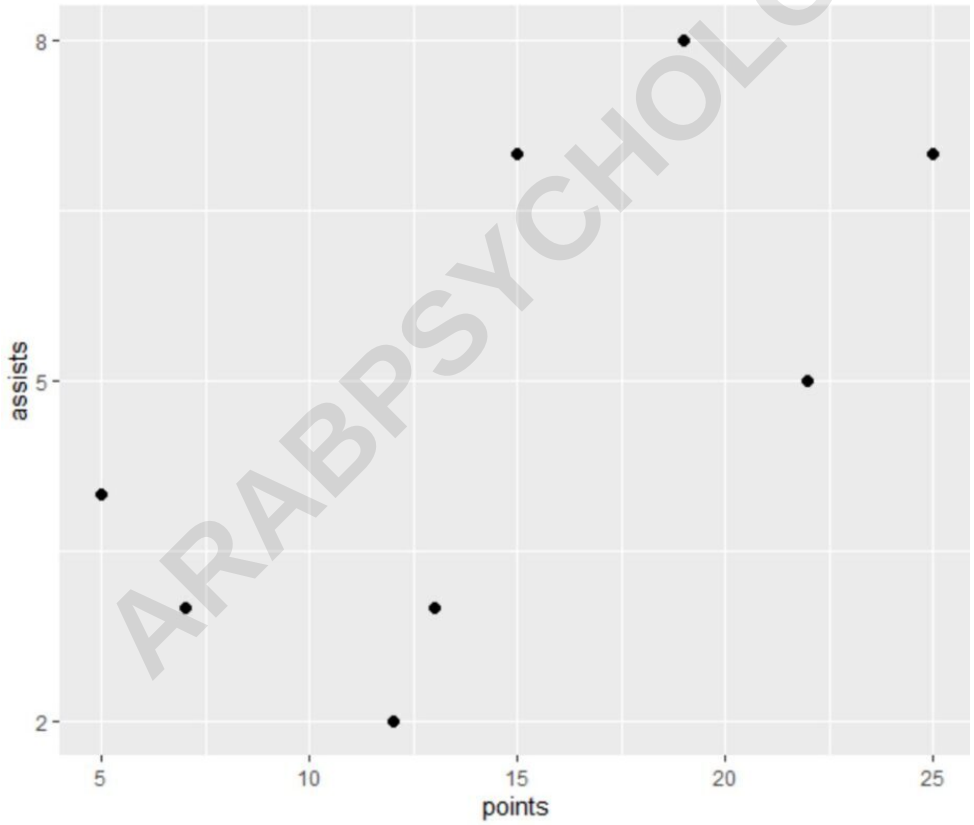
Example 1: Use scale_y_continuous with Custom Axis Breaks

The following code shows how to create a scatterplot in

ggplot2 and use scale_y_continuous() with the breaks argument to specify custom axis breaks of 2, 5 and 8:

```
library(ggplot2)

#create scatterplot with custom y-axis breaks
ggplot(df, aes(x=points, y=assists)) +
geom_point(size=2) +
scale_y_continuous(breaks=c(2, 5, 8))
```



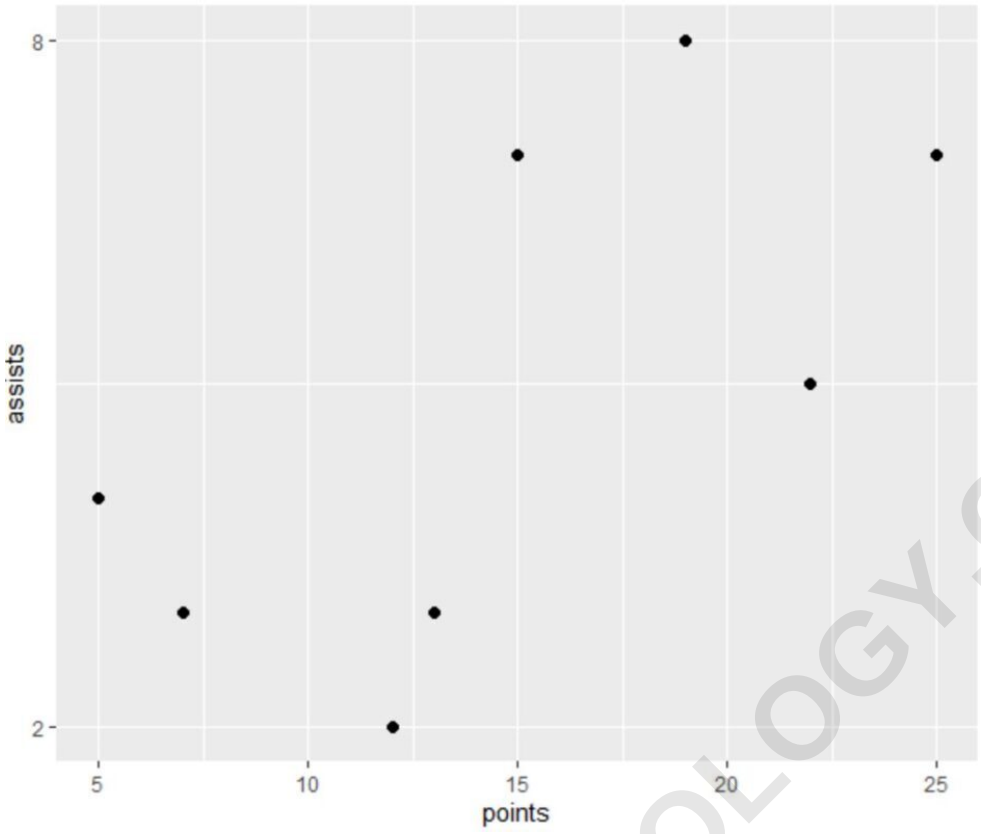
Notice that the y-axis only contains axis breaks at 2, 5 and 8, just as we specified using the breaks argument.

Example 2: Use scale_y_continuous with Custom Number of Breaks

The following code shows how to create a scatterplot in ggplot2 and use scale_y_continuous() with the n.breaks argument to place exactly 2 axis breaks on the y-axis:

```
library(ggplot2)

#create scatterplot with custom number of breaks on y-axis
ggplot(df, aes(x=points, y=assists)) +
geom_point(size=2) +
scale_y_continuous(n.breaks=2)
```



Notice that the y-axis contains exactly 2 axis breaks, just as we specified using the n.breaks argument.

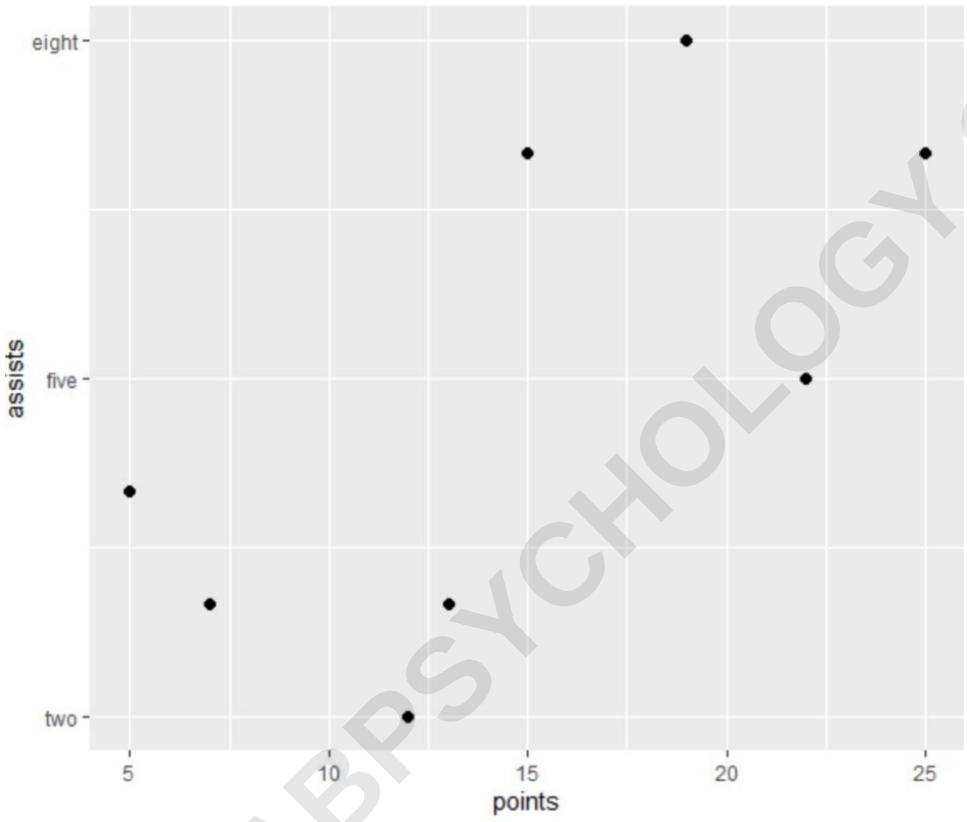
Example 3: Use scale_y_continuous with Custom Labels

The following code shows how to create a scatterplot in ggplot2 and use scale_y_continuous() with the labels argument to specify the label names to place on the y-axis:

```
library(ggplot2)

#create scatterplot with custom labels
```

```
ggplot(df, aes(x=points, y=assists)) +
geom_point(size=2) +
scale_y_continuous(breaks=c(2, 5, 8), labels=c('two', 'five', 'eight'))
```



Notice that the y-axis contains 3 axis breaks each with custom labels, just as we specified using the labels argument.

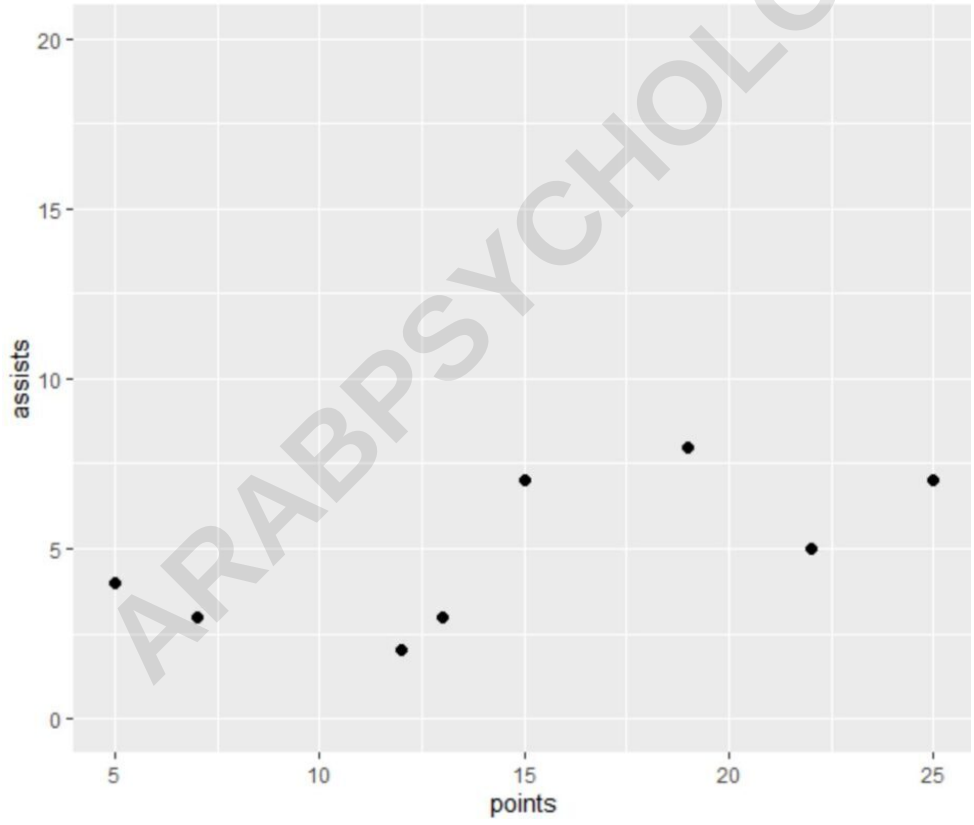
Example 4: Use scale_y_continuous with Custom Limits

The following code shows how to create a scatterplot in

ggplot2 and use scale_y_continuous() with the limits argument to specify custom y-axis limits of 0 and 20:

```
library(ggplot2)

#create scatterplot with custom y-axis limits
ggplot(df, aes(x=points, y=assists)) +
geom_point(size=2) +
scale_y_continuous(limits=c(0, 20))
```



Notice that the y-axis ranges from 0 to 20, just as we specified using the limits argument.

The following tutorials explain how to perform other common tasks in ggplot2: