How can I create an Ogive graph in R?

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An Ogive graph, also known as a cumulative frequency graph, is a graphical representation of the cumulative frequency distribution of a data set. To create an Ogive graph in R, you can follow these steps:

1. First, load the necessary packages for creating graphs in R, such as "ggplot2" and "reshape2".

2. Next, import your data set into R and save it as a data frame.

3. Then, use the "cumsum" function to calculate the cumulative frequency for each data point.

4. Use the "ggplot" function to create a basic plot with the cumulative frequency on the y-axis and the data points on the x-axis.

5. To create a smooth curve, use the "geom_line" function and set the "stat = "identity"".

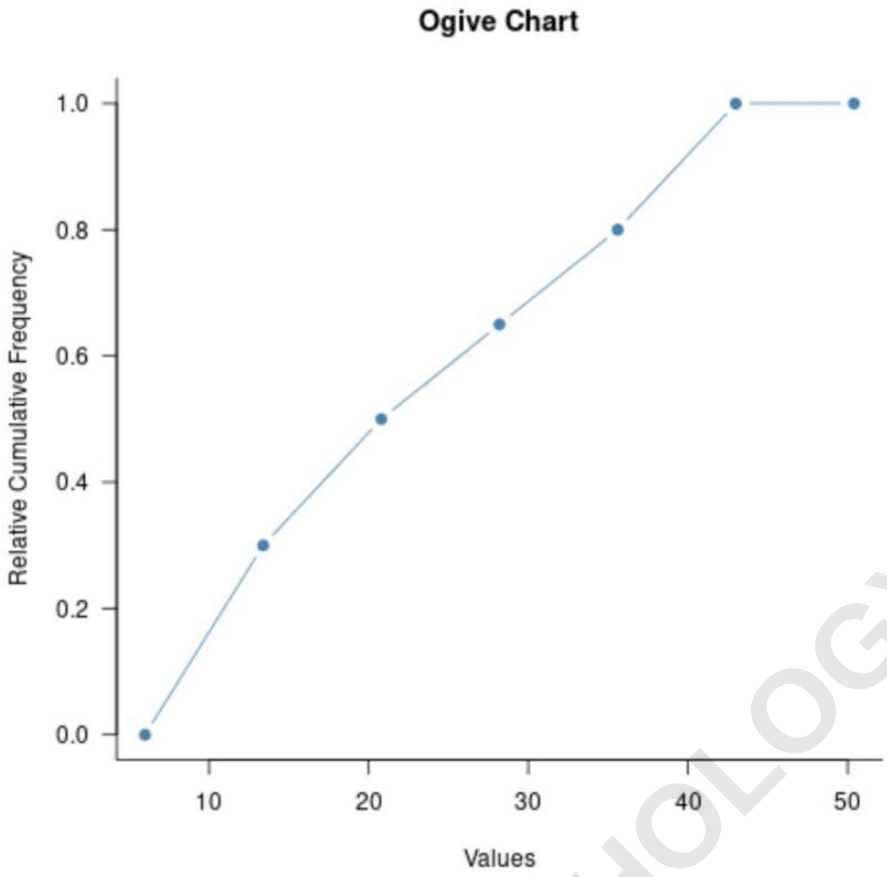
6. Finally, add labels, titles, and other formatting options to make the graph more presentable.

By following these steps, you can easily create an Ogive graph in R to visualize the cumulative frequency distribution of your data set.

Create an Ogive Graph in R

An ogive is a graph that shows how many data values lie above or below a certain value in a dataset.

This tutorial explains how to create the following ogive graph in R:



Example: Create Ogive Graph in R

First, let's define a dataset that contains 20 values:

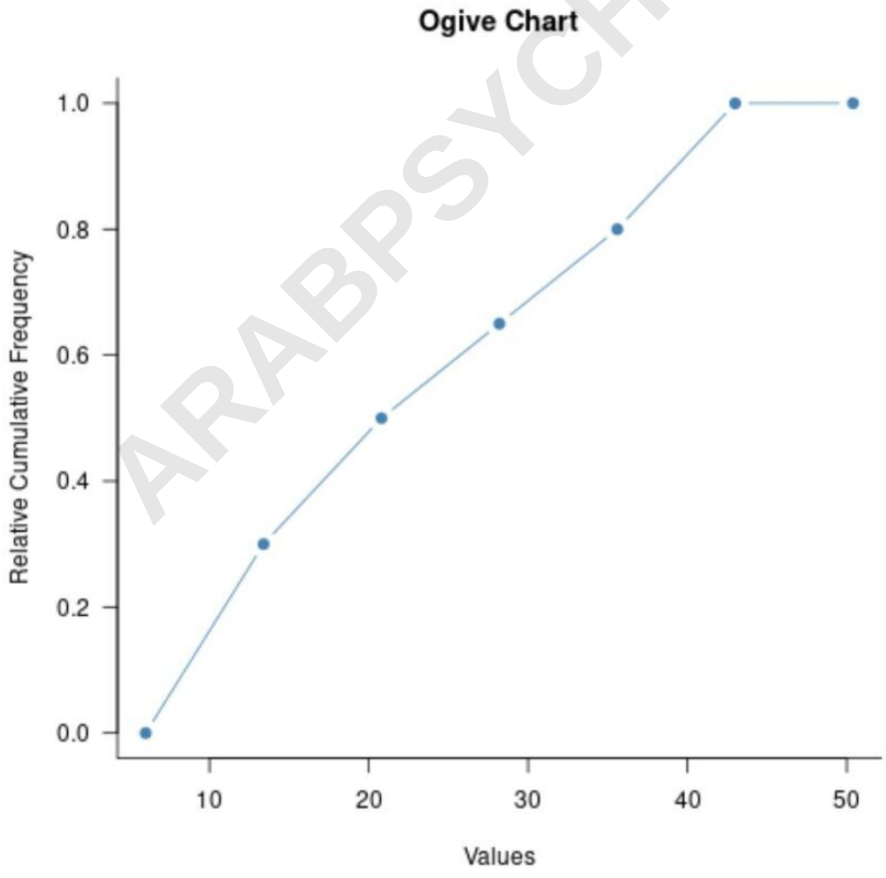
```
#create dataset
data <- c(6, 7, 7, 8, 9, 12, 14, 16, 16, 17, 22, 24, 28, 31, 34, 35, 39, 41, 42, 43)
```

Next, let's use the graph.freq() and ogive.freq() functions from the agricolae package in R to create a simple ogive graph:

```
library(agricolae)

#define values to plot
value_bins <- graph.freq(data, plot=FALSE)
values <- ogive.freq(value_bins, frame=FALSE)

#create ogive chart
plot(values, xlab='Values', ylab='Relative Cumulative Frequency',
main='Ogive Chart', col='steelblue', type='b', pch=19,
las=1, bty='l')
```



The x-axis shows the values from the dataset and the y-axis shows the relative cumulative frequency of values that lie below the values shown on the x-axis.

Here is how to interpret some of the more obscure arguments in the plot() function:

type='b': Plot *both* lines and pointspch=19: Fill in the circles in the plotlas=1: Make labels perpendicular to axisbty='l': Only show the border on the bottom and left sides of the plot

We can view the actual values in the plot by printing the values created from the ogive.freq() function:

```
#view values in ogive
values

x RCF
1 6.0 0.00
2 13.4 0.30
3 20.8 0.50
4 28.2 0.65
5 35.6 0.80
6 43.0 1.00
```

7 50.4 1.00

Here's how to interpret the values:

0% of all values in the dataset were less than or equal to 6.30% of all values in the dataset were less than or equal to 13.4.50% of all values in the dataset were less than or equal to 20.8.65% of all values in the dataset were less than or equal to 35.6.

And so on.

Additional Resources

The following tutorials explain how to create other common charts in R: