# Pie Charts

Pie charts are not recommended in the R documentation, and their features are somewhat limited. The authors recommend bar or dot plots over pie charts because people are able to judge length more accurately than volume. Pie charts are created with the function **pie(*x*, labels=)** where *x* is a non-negative numeric vector indicating the area of each slice and labels= notes a character vector of names for the slices.
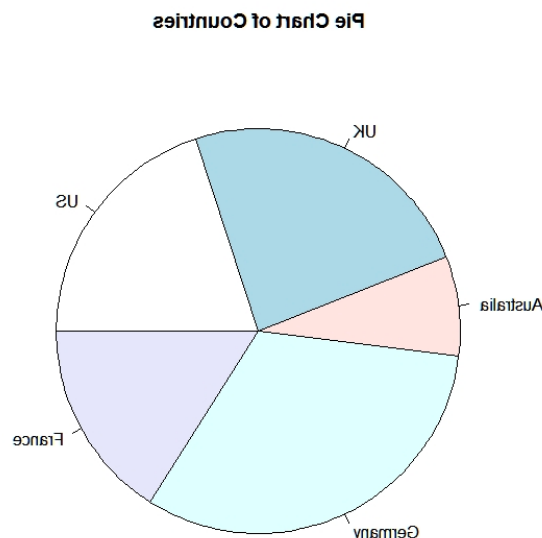
## Simple Pie Chart

```
# Simple Pie Chart
```

```
slices <- c(10, 12,4, 16, 8)
```

```
lbls <- c("US", "UK", "Australia", "Germany", "France")
```

```
pie(slices, labels = lbls, main="Pie Chart of Countries")
```



## Pie Chart with Annotated Percentages

```
# Pie Chart with Percentages
```

```
slices <- c(10, 12, 4, 16, 8)
```

```
lbls <- c("US", "UK", "Australia", "Germany", "France")

pct <- round(slices/sum(slices)*100)

lbls <- paste(lbls, pct) # add percents to labels

lbls <- paste(lbls,"%",sep="") # ad % to labels

pie(slices,labels = lbls, col=rainbow(length(lbls)),

    main="Pie Chart of Countries")
```
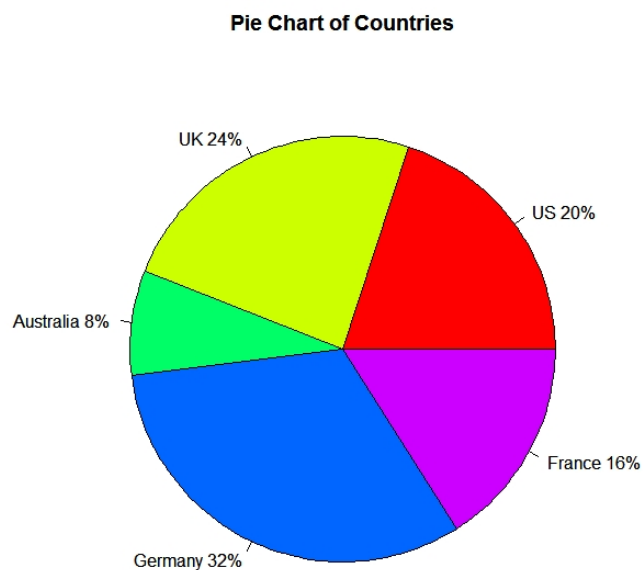
**Pie Chart of Countries**



# 3D Pie Chart

The **pie3D( )** function in the plotrix package provides 3D exploded pie charts.

```
# 3D Exploded Pie Chart

library(plotrix)

slices <- c(10, 12, 4, 16, 8)

lbls <- c("US", "UK", "Australia", "Germany", "France")
```
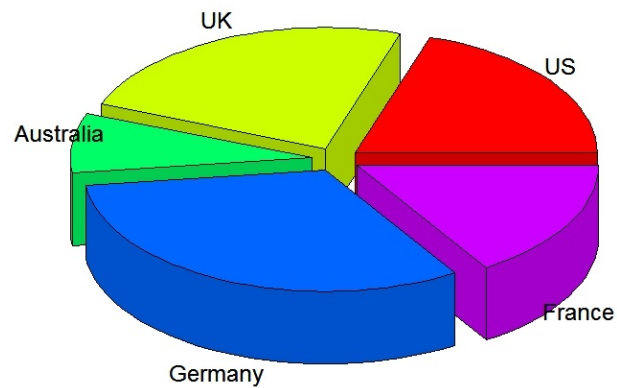
```
pie3D(slices,labels=lbls,explode=0.1,

    main="Pie Chart of Countries ")
```

**Pie Chart of Countries**



## Creating Annotated Pies from a data frame

```
# Pie Chart from data frame with Appended Sample Sizes

mytable <- table(iris$Species)

lbls <- paste(names(mytable), "\n", mytable, sep="")

pie(mytable, labels = lbls,

    main="Pie Chart of Species\n (with sample sizes)")
```

**Pie Chart of Species
(with sample sizes)**

setosa
50

versicolor
50

virginica
50