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# Examples of R command (Try the following R commands)

> test = scan() # Enter at least 30 counting numbers range from 1 to 6

## For one discrete variable
> table(test) # Produce frequency table
> barplot(test) # Make bar chart but is incorrect bar chart for discrete data
> barplot(table(test),xlab="Sample", ylab="Frequency") # Make bar chart with labels

> barplot(table(test)/length(test), xlab="Sample", ylab="Relative Frequency")
# Make relative frequency bar chart with labels

> pie(table(test)) # Make pie chart

> pie(table(test), col=gray(c(.4, .5, .6, .7, .8, .9))) # Try changing gray values
+ there are 6 gray values since there are six different outcomes

## For one continuous variable
> stem(test) # Make stemplot

> hist(test) # Make histogram
> hist(test,breaks=3) # Make histogram with number of intervals specified

> hist(test, prob=TRUE) # Make relative frequency histogram
> lines(density(test)) # Fit the data with curve

> boxplot(test) # Make boxplot

> quantile(test, 0.9) # Find 90th percentile
> quantile(test, .1) # Find 10th percentile

> sd(test) # Find sample standard deviation
> mean(test) # Find mean

> IQR(test) # Find Interquartile Range

> stripchart(test,method="stack") # Make dotplot
> stripchart(test,method="stack",pch=1,offset=1,cex=2) # Try changing the parameter
+ value for pch, offset, and cex

# For bivariate categorical data
> rbind(c(20,30),c(5,45)) # Create contingency table

> cbind(c(20,5),c(30,45)) # Create contingency table

> x = matrix(c(20,5,30,45),nrow=2) # Use of matrix for entering data
> x

> rownames(x) = c("Smoker","Non-smoker") # Name the row variable
> colnames(x) = c("Cancer","No Cancer") # Name the column variable
> x

> barplot(x,xlab="Smoking", main="Smoking and Lung Cancer", beside=TRUE)
# Make cluster bar chart

> prop.table(x) # Make relative frequency distribution table

> barplot(prop.table(x), xlab="Smoking", main="Smoking and Lung Cancer",
+ legend.text=TRUE, beside=TRUE) # Cluster bar chart with legend

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