

R as a Calculator

<code>exp(x)</code>	Exponential	<code>sum(x)</code>	Sum.
<code>log(x)</code>	Natural log.	<code>cumsum(x)</code>	Cumulative Sum.
<code>max(x)</code>	Largest element.	<code>ceil(x)</code>	Round up.
<code>min(x)</code>	Smallest element.	<code>floor(x)</code>	Round down.
<code>mean(x)</code>	Mean.	<code>median(x)</code>	Median.
<code>var(x)</code>	Variance.	<code>quantile(x)</code>	Percentage quantiles.
<code>x %% y</code>	Modulo		

Univariate Data: I/O

<code>write(data, "mydata.dat")</code>	Write data as binary.
<code>scan("mydata.dat")</code>	Read binary data.

Univariate Data: Plotting

<code>plot(data)</code>	Plot quick overview.
<code>barplot(x)</code>	Barplot of absolute frequencies.
<code>plot.ecdf(data)</code>	Plot ECDF.
<code>hist(data, prob=TRUE)</code>	Histogram of relative frequencies.
<code>rug(data)</code>	1D-plot
<code>hist(data, breaks=30)</code>	Specify subdivisions of histogram.

Creating Vectors

<code>c(2, 4, 6)</code>	Join elements into a vector
<code>2:6</code>	An integer sequence (end inclusive!)
<code>seq(2, 3, by=0.5)</code>	Complex sequence (s. <code>np.linspace</code>)
<code>rep(1:2, 3)</code>	Repeat vector
<code>rep(1:2, 3:4)</code>	Repeat each element

Vector Functions

<code>sort(x)</code>	Return x sorted.
<code>rev(x)</code>	Return x reversed.
<code>table(x)</code>	See counts of values.
<code>unique(x)</code>	See unique values.
<code>length(x)</code>	Length of x.



By BarplotNorm

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Selecting Vector Elements

By Position

<code>x[4]</code>	The fourth element
<code>x[-4]</code>	All but the fourth.
<code>x[2:4]</code>	Elements two to four
<code>x[-(2:4)]</code>	All elements except 2 to four
<code>x[c(1, 5)]</code>	Elements one and five.

By Value

<code>x[x == 10]</code>	All elements equal to 10
<code>x[x < 10]</code>	All elements less than 10.
<code>x[x %in% c(1, 2, 5)]</code>	Elements in the given set.

Named Vectors

<code>x['apple']</code>	Element with name 'apple'.
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Runs Test of Randomness

<code>rle(x)</code>	Compute the lengths and values of runs of equal values in a vector .
<code>rle(x)\$lengths</code>	Vector containing the length of each run.
<code>rle(x)\$values</code>	Vector of the same length as lengths with the corresponding values.



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