

R Example One

\$ R

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```
> 1+1
[1] 2
> 1:30
 [1] 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
[26] 26 27 28 29 30
> gamma(.5)^2      # Gamma(1/2) = Sqrt(Pi)
[1] 3.141593
> x <- 1           # Assigns the value 1 to x
> y <- 2
> x+y
[1] 3
> z <- x+y
> z
[1] 3
> x <- c(1,2,3,4,5,6) # Collect these numbers; x is now a vector
> y <- 1 + 2*x
> cbind(x,y)
      x y
[1,] 1 3
[2,] 2 5
[3,] 3 7
[4,] 4 9
[5,] 5 11
[6,] 6 13
> z <- y[x>4]      # z gets y such that x > 4
> z
[1] 11 13
> z <- x/y         # Most operations are performed element by element
> cbind(x,y,z)
      x y      z
[1,] 1 3 0.3333333
[2,] 2 5 0.4000000
[3,] 3 7 0.4285714
[4,] 4 9 0.4444444
[5,] 5 11 0.4545455
[6,] 6 13 0.4615385
```

```
> x <- seq(from=0,to=3,by=.1) # A sequence of numbers
> y <- sqrt(x)
> pdf("testor.pdf")
> plot(x,y,type='l') # That's a lower case L, for "line."
> q() # Quitting is a function with no arguments
Save workspace image? [y/n/c]: y
$ ls
testor.pdf
$ ls -a
.          ..          .RData      .Rhistory  testor.pdf
$ R

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[Previously saved workspace restored]

> max(x)
[1] 3
> # It's all there.
>
```

