Justin Keller

Primer of Ecology with R appendix B Homework

> #

> #this is how you take notes

> [1]0.1053

Error: unexpected '[' in "["

> mean(rnorm(10))

[1] 0.1181927

> '?'(mean)

> '?'(wilcoxon)

No documentation for ‘wilcoxon’ in specified packages and libraries:

you could try ‘??wilcoxon’

> help("mean",htmlhelp=FALSE)

Error in help("mean", htmlhelp = FALSE) :

unused argument (htmlhelp = FALSE)

> options(htmlhelp=FALSE)

> help(mean)

> helo.search('mean')

Error: could not find function "helo.search"

> help.search('mean')

> apropos('mean)')

character(0)

> apropos("mean")

[1] ".colMeans" ".rowMeans" "colMeans" "kmeans"

[5] "mean" "mean.Date" "mean.default" "mean.difftime"

[9] "mean.POSIXct" "mean.POSIXlt" "rowMeans" "weighted.mean"

> #these are related functions to the 'mean' function

> RSitesearch('violin')

Error: could not find function "RSitesearch"

> RsiteSearch("violin")

Error: could not find function "RsiteSearch"

> RsiteSearch("violin")

Error: could not find function "RsiteSearch"

> RSiteSearch("violin")

A search query has been submitted to http://search.r-project.org

The results page should open in your browser shortly

> RSiteSearch("violin", restrict=c("functions"))

A search query has been submitted to http://search.r-project.org

The results page should open in your browser shortly

> help(RSiteSearch)

> a,<-2+3

Error: unexpected ',' in "a,"

> a<-2+3

> a

[1] 5

> b<-a+a

> a+a

[1] 10

> a+a;a+b

[1] 10

[1] 15

> #semicolon allows you to perfom multiple actions at ones

> Y,\_c(8.3,8.6,10.7,10.8,11,11,11.1,11.2,11.3,11.4)

Error: unexpected ',' in "Y,"

> Y=c(8.3,8.6,10.7,10.8,11,11,11.1,11.2,11.3,11.4)

> #global environment logs all established values

>

> 1:4

[1] 1 2 3 4

> 4:1

[1] 4 3 2 1

> -1:3

[1] -1 0 1 2 3

> [1]

Error: unexpected '[' in "["

> -(1:3)

[1] -1 -2 -3

> seq(from=1,to=3,by=0.2)

[1] 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0

> seq(1,3,by=0.2)

[1] 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0

> seq(1,3, length7)

Error in seq.default(1, 3, length7) : object 'length7' not found

> seq(1,3, length =7)

[1] 1.000000 1.333333 1.666667 2.000000 2.333333 2.666667 3.000000

> rep(1,3)

[1] 1 1 1

> rep(1:3, 2)

[1] 1 2 3 1 2 3

> rep(1:3), each=2)

Error: unexpected ',' in "rep(1:3),"

> rep(1:3, each=2)

[1] 1 1 2 2 3 3

> SUM(Y)

Error: could not find function "SUM"

> SUM(Y)

Error: could not find function "SUM"

> sum(Y)

[1] 105.4

> mean(Y)

[1] 10.54

> max(Y)

[1] 11.4

> length(Y

+

+

+ stop()

Error: unexpected symbol in:

"

stop"

> length(Y)

[1] 10

> summary(Y)

Min. 1st Qu. Median Mean 3rd Qu. Max.

8.30 10.72 11.00 10.54 11.18 11.40

> Names<-c("Sarah", "Yunlaun")

> b<-c(TRUE,FALSE)

> b

[1] TRUE FALSE

> class(Y)

[1] "numeric"

> class(b)

[1] "logical"

> Y.10

Error: object 'Y.10' not found

> y>10

Error: object 'y' not found

> Y>10

[1] FALSE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE

> Y>mean(Y)

[1] FALSE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE

> Y==11

[1] FALSE FALSE FALSE FALSE TRUE TRUE FALSE FALSE FALSE FALSE

> Y!=11

[1] TRUE TRUE TRUE TRUE FALSE FALSE TRUE TRUE TRUE TRUE

> a<-1:3

> b<-4:6

> a+b

[1] 5 7 9

> a\*b

[1] 4 10 18

> a/b

[1] 0.25 0.40 0.50

> a+1

[1] 2 3 4

> a\*2

[1] 2 4 6

> 1/a

[1] 1.0000000 0.5000000 0.3333333

> a\*1:2

[1] 1 4 3

Warning message:

In a \* 1:2 :

longer object length is not a multiple of shorter object length

> a\*1:2

[1] 1 4 3

Warning message:

In a \* 1:2 :

longer object length is not a multiple of shorter object length

> a\*c(1,2,1)

[1] 1 4 3

> 1:4\*1:2

[1] 1 4 3 8

> 1:4\*c(1,2,1,2)

[1] 1 4 3 8

> Y[1]

[1] 8.3

> Y[1:3]

[1] 8.3 8.6 10.7

> Y>mean(y)

Error in mean(y) : object 'y' not found

> Y>mean(Y)

[1] FALSE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE

> Y[Y>mean(Y)]

[1] 10.7 10.8 11.0 11.0 11.1 11.2 11.3 11.4

> a<-c(5,3,6,NA)

> a

[1] 5 3 6 NA

> is.na(a)

[1] FALSE FALSE FALSE TRUE

> !is.na(a)

[1] TRUE TRUE TRUE FALSE

> a[!is.na(a)]

[1] 5 3 6

> na.exclude(a)

[1] 5 3 6

attr(,"na.action")

[1] 4

attr(,"class")

[1] "exclude"

> mean(a)

[1] NA

> mean(a,na.rm=TRUE)

[1] 4.666667

> d<-na.exlude(a)

Error: could not find function "na.exlude"

> d<-na.exclude(a)

> mean(d)

[1] 4.666667

> matrix(letters[1:4],ncol=2)

[,1] [,2]

[1,] "a" "c"

[2,] "b" "d"

> M<-matrix(1:4, nrow=2)

> View(M)

> View(M)

> View(M)

> M2<-matrix(1:4,nrow=2,byrow=TRUE)

> View(M2)

> View(M)

> View(M2)

> View(M)

> View(M)

> View(M)

> View(M2)

> I<-diag(1,nrow=2)

> I

[,1] [,2]

[1,] 1 0

[2,] 0 1

> Minv<-solve(M)

> M%\*% Minv

[,1] [,2]

[1,] 1 0

[2,] 0 1

> M[1,2]

[1] 3

> View(M)

> M[1,1:2]

[1] 1 3

> M[,2]

[1] 3 4

> M[,]

[,1] [,2]

[1,] 1 3

[2,] 2 4

> dat<-data.frame(species=c("S.altissima", "S.rugosa", "E.graminifolia", "A.pilosus"),treatment=factor(c("Control", "Water","Control","Water")),height=c(1.1,0.8,0.9,1),width=c(1,1.7,0.6,0.2))

> View(dat)

> #use esc key to get rid of endless +

> dat[2,]

species treatment height width

2 S.rugosa Water 0.8 1.7

> dat[3,4]

[1] 0.6

> dat[dat[,2]=="Water",]

species treatment height width

2 S.rugosa Water 0.8 1.7

4 A.pilosus Water 1.0 0.2

> subset(dat,treatment=="Water")

species treatment height width

2 S.rugosa Water 0.8 1.7

4 A.pilosus Water 1.0 0.2