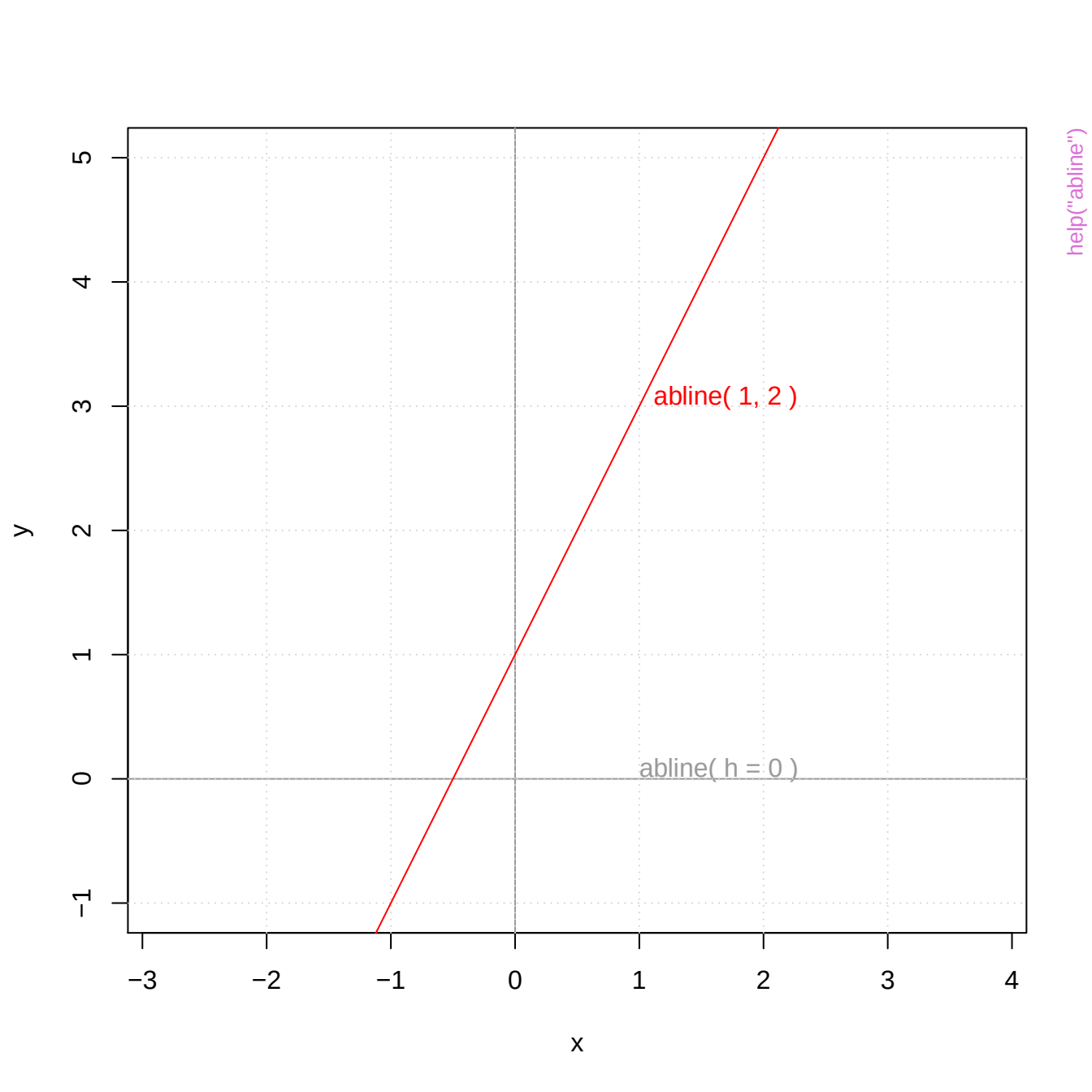
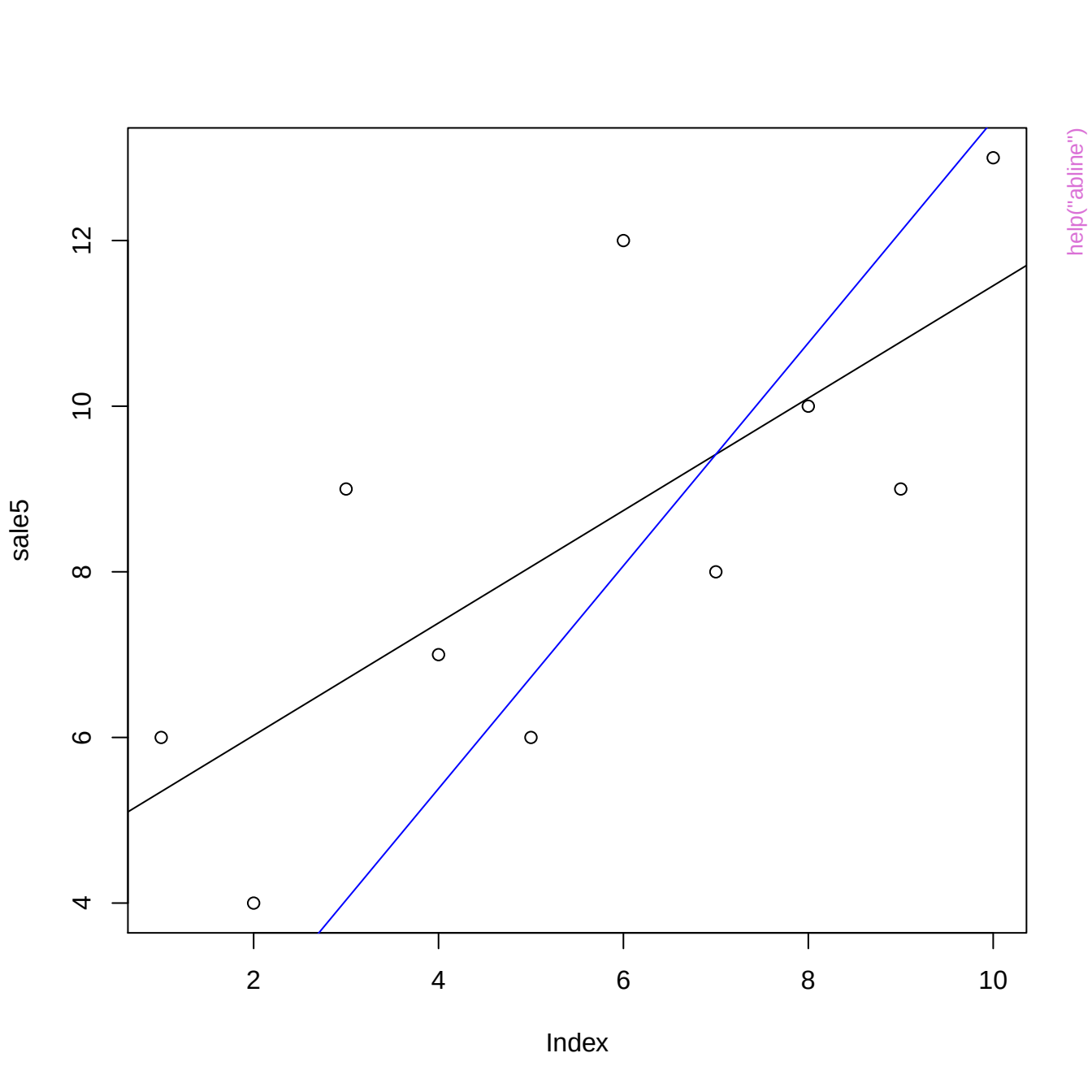
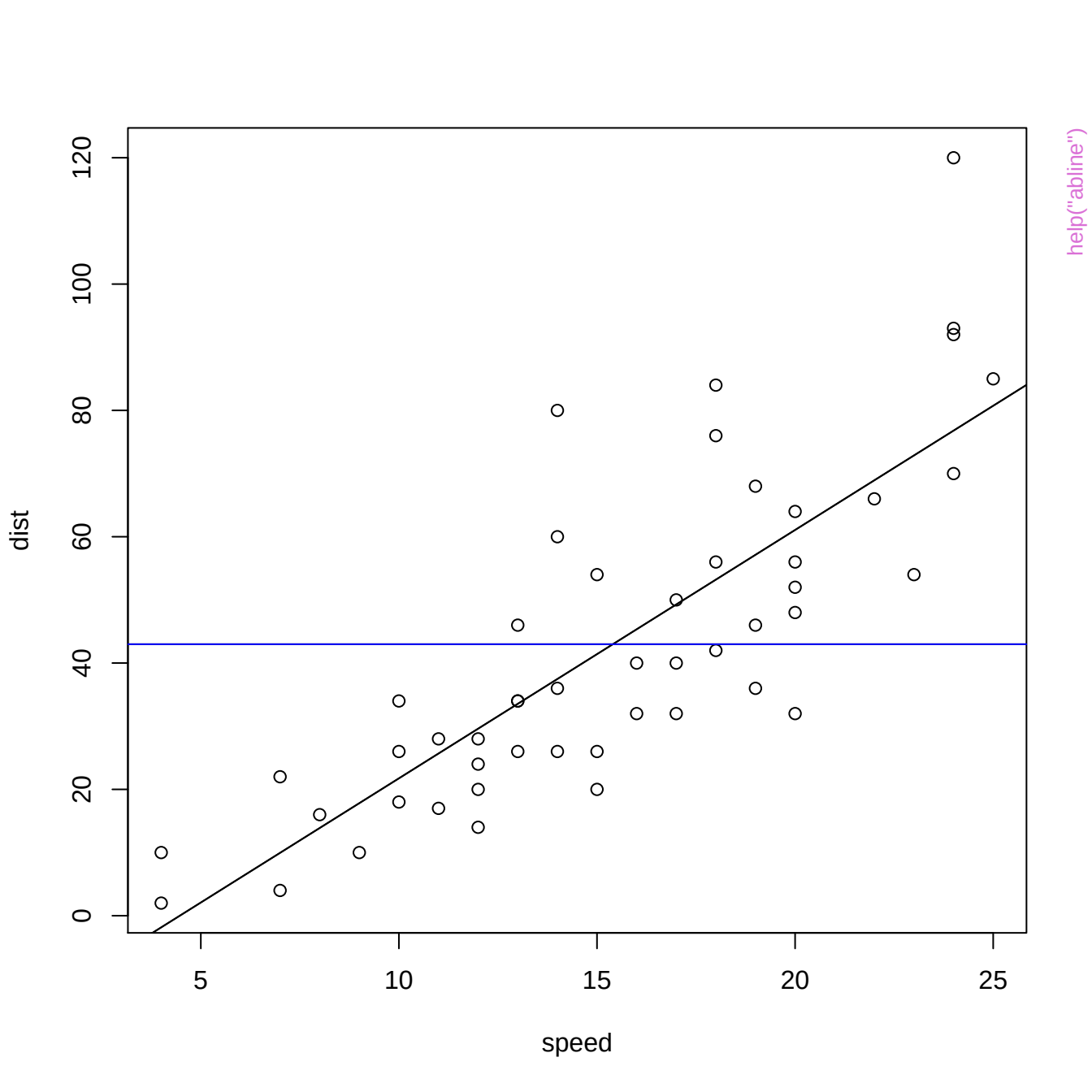
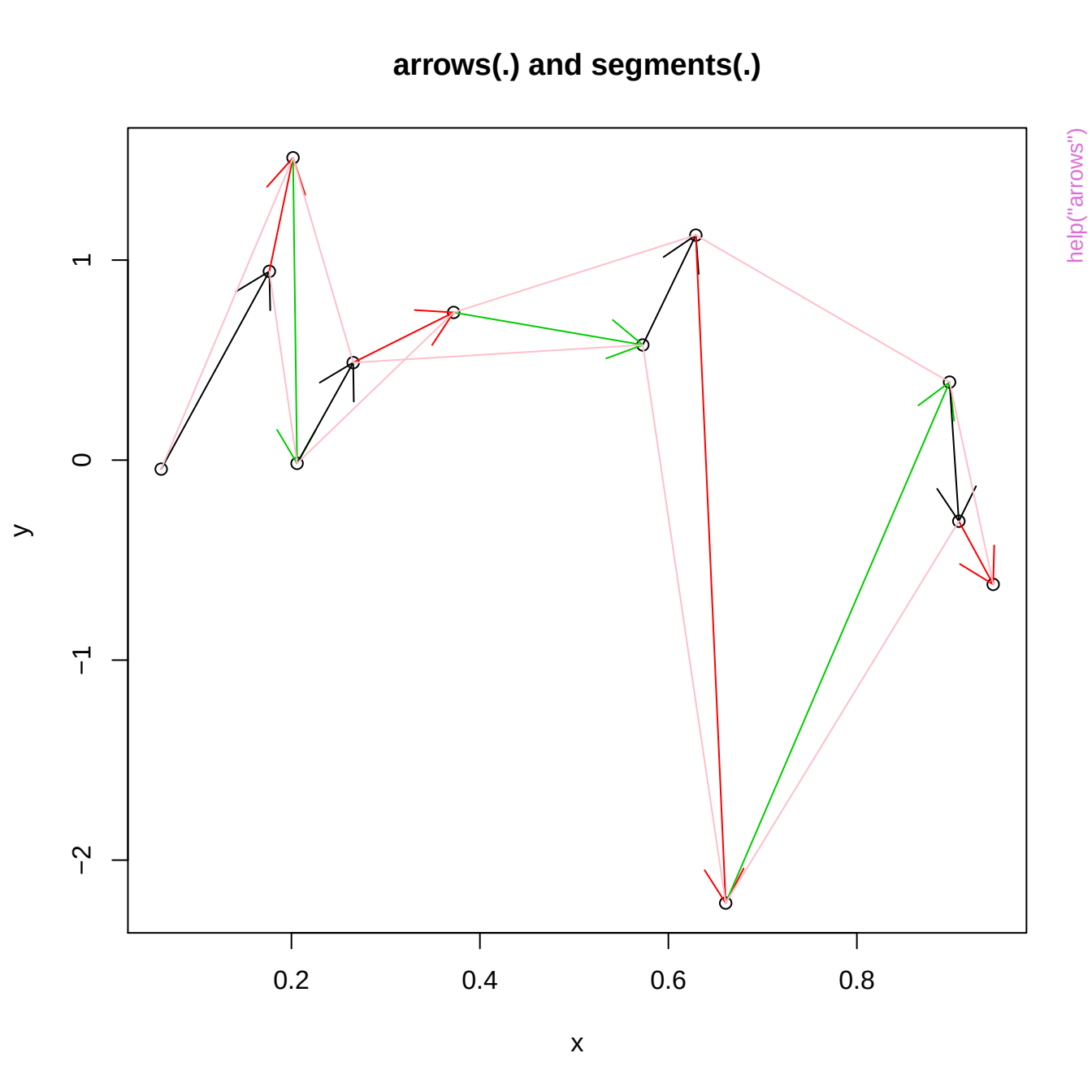
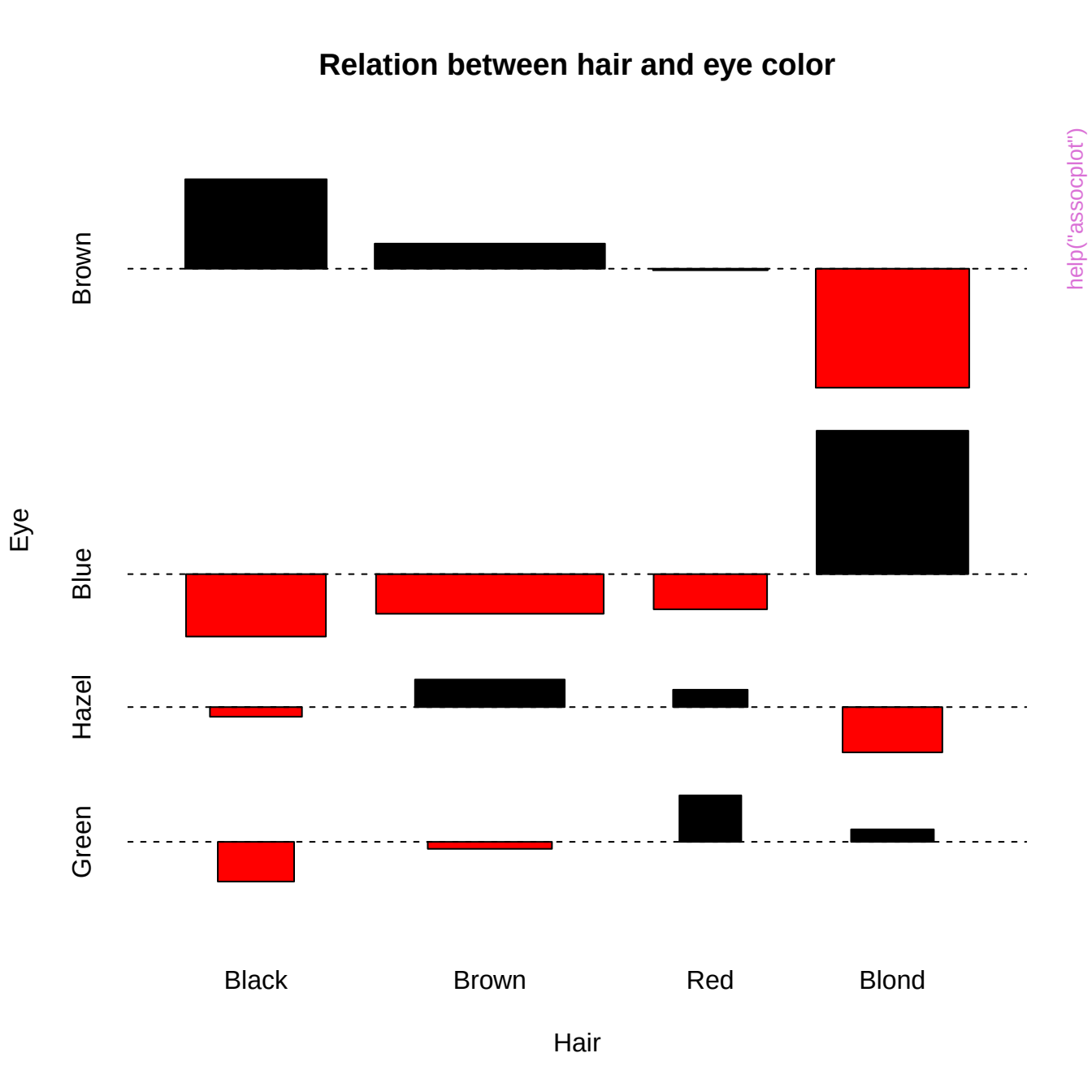
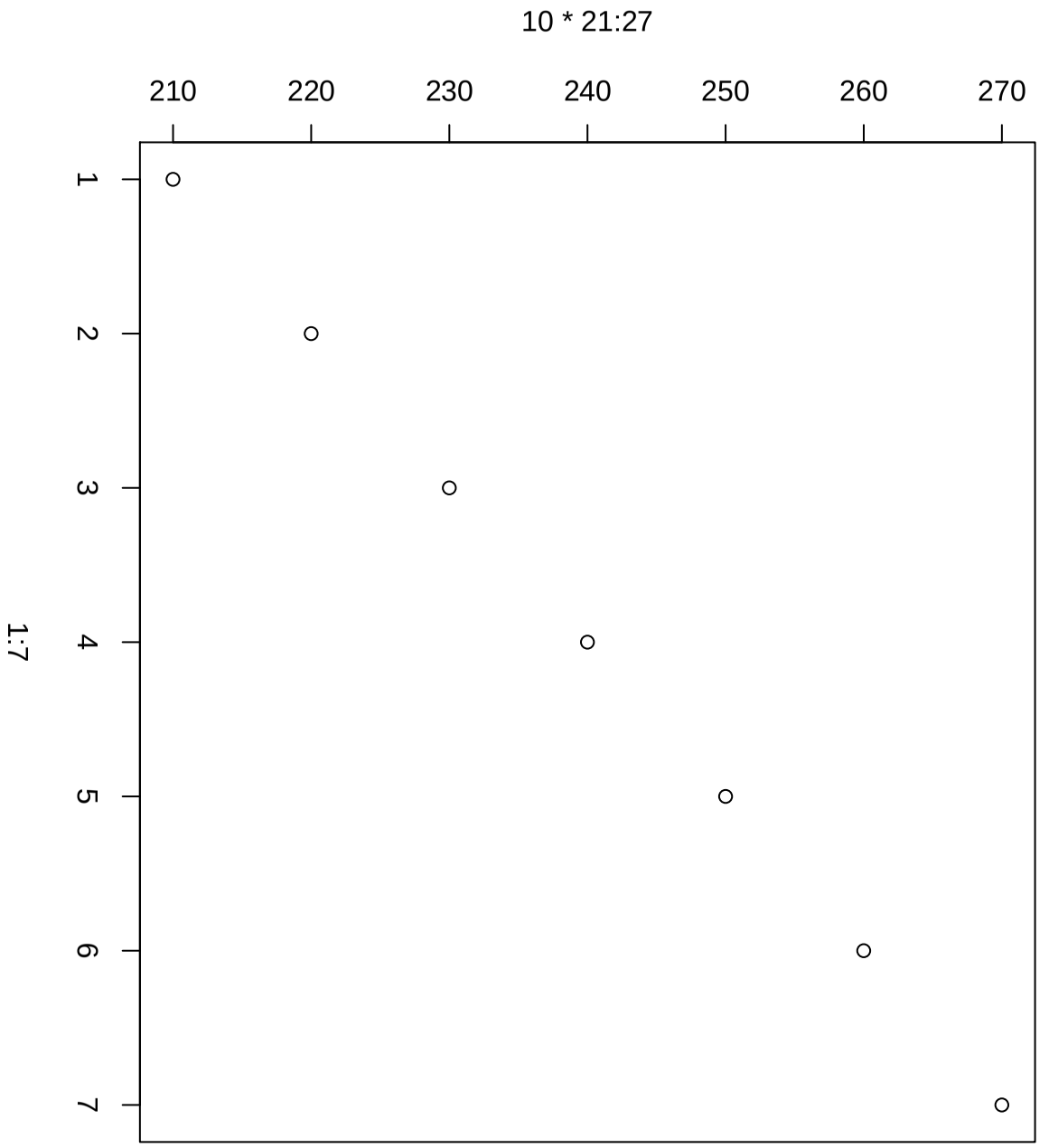

help("abline")
abline(1, 2)
abline(h = 0)
y
x
5
4
3
2
1
0
−1
−3
−2
−1
0
1
2
3
4


sale5
Index
4
6
8
10
12
2
4
6
8
10
help("abline")

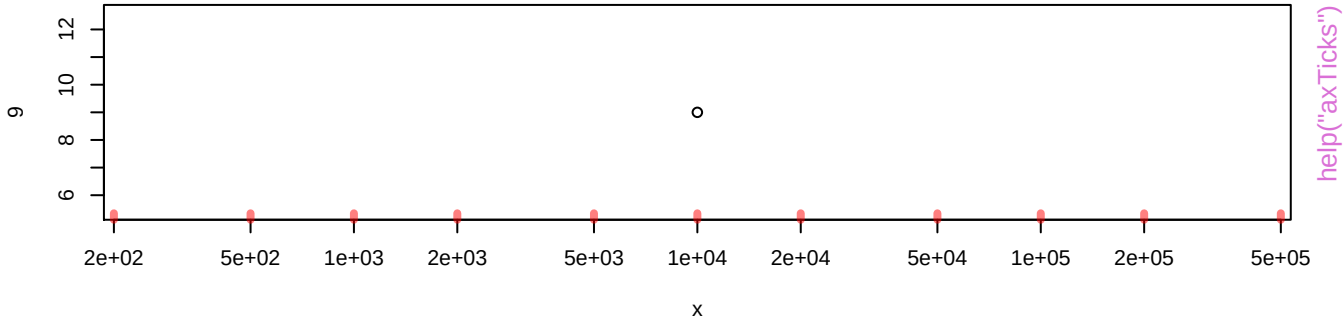

dist
speed
0
20
40
60
80
100
120
5
10
15
20
25
help("abline")


arrows(.) and segments(.)
help("arrows")
y
x
1
0
−1
−2
0.2
0.4
0.6
0.8

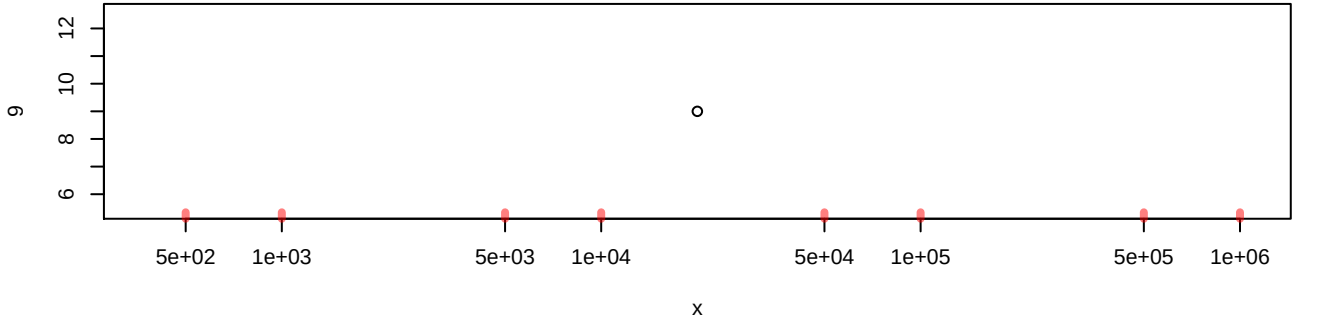

Relation between hair and eye color
help("assocplot")
Eye
Brown
Blue
Hazel
Green
Black
Brown
Red
Blond
Hair

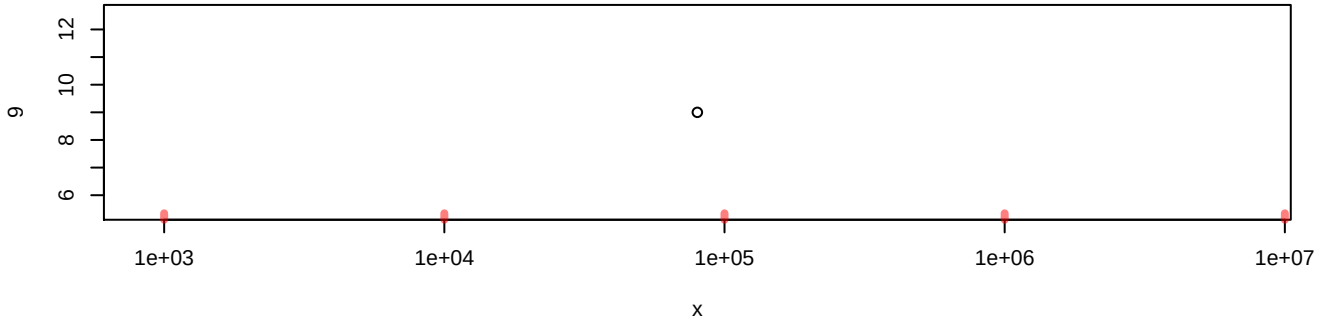


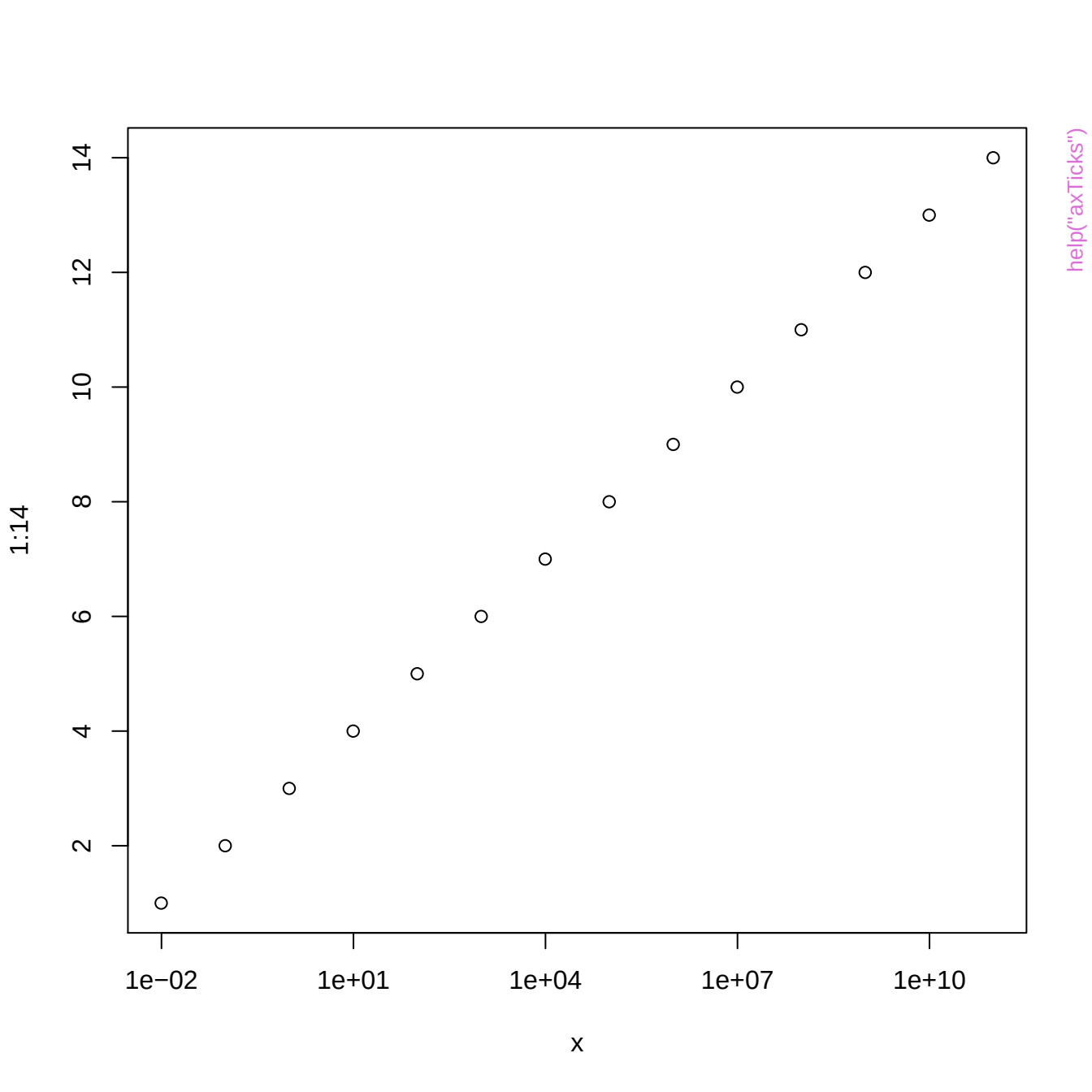
help("axTicks")

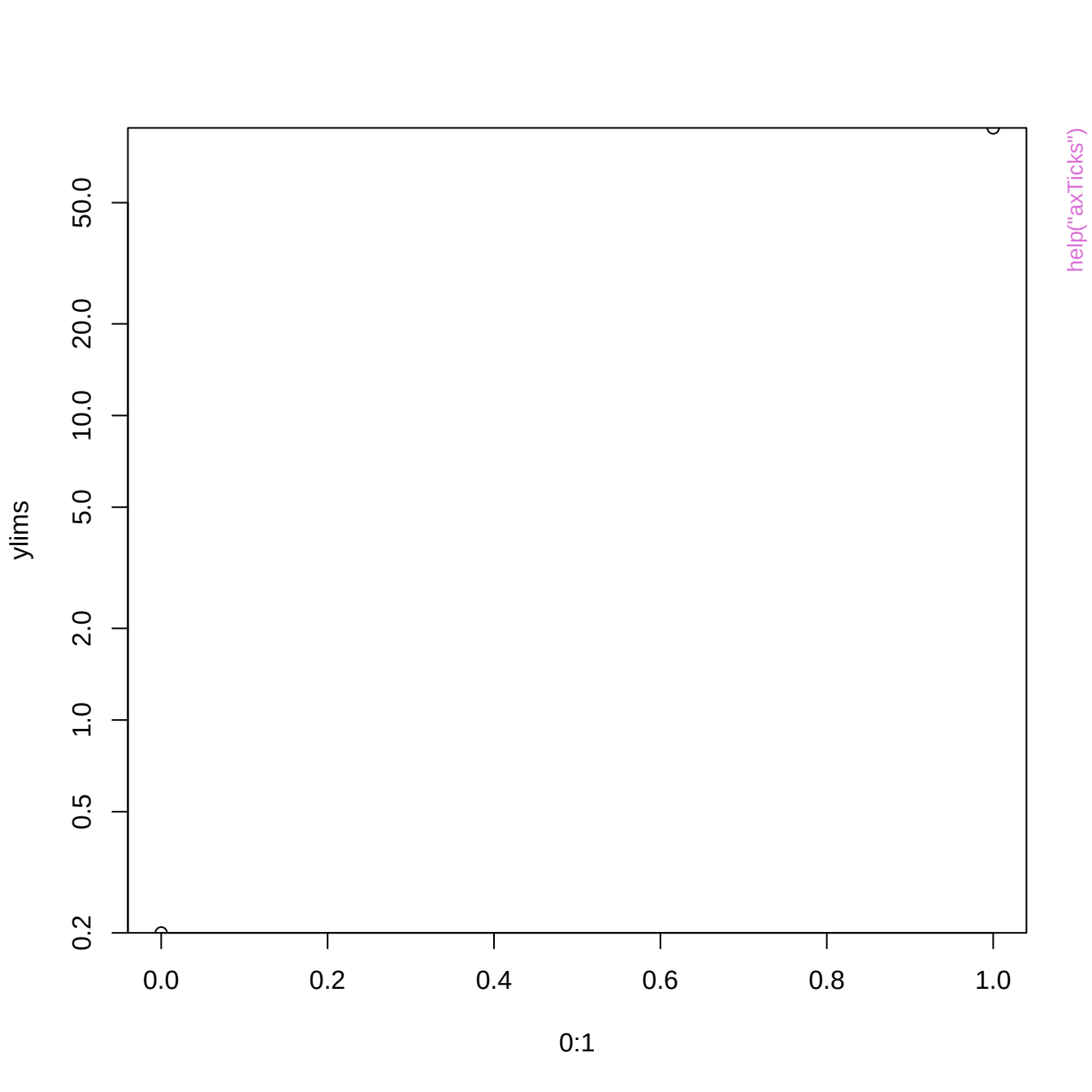


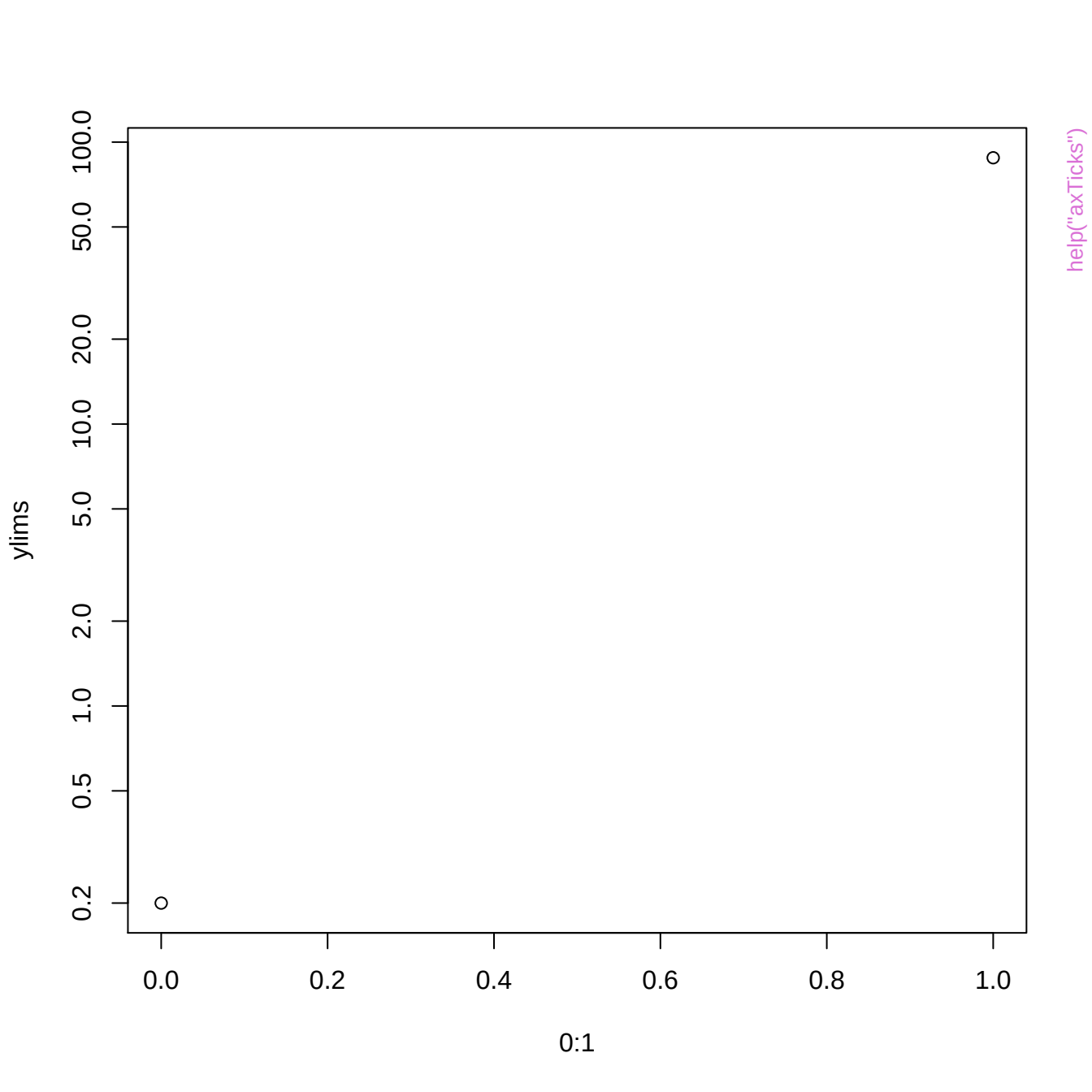
help("axTicks")

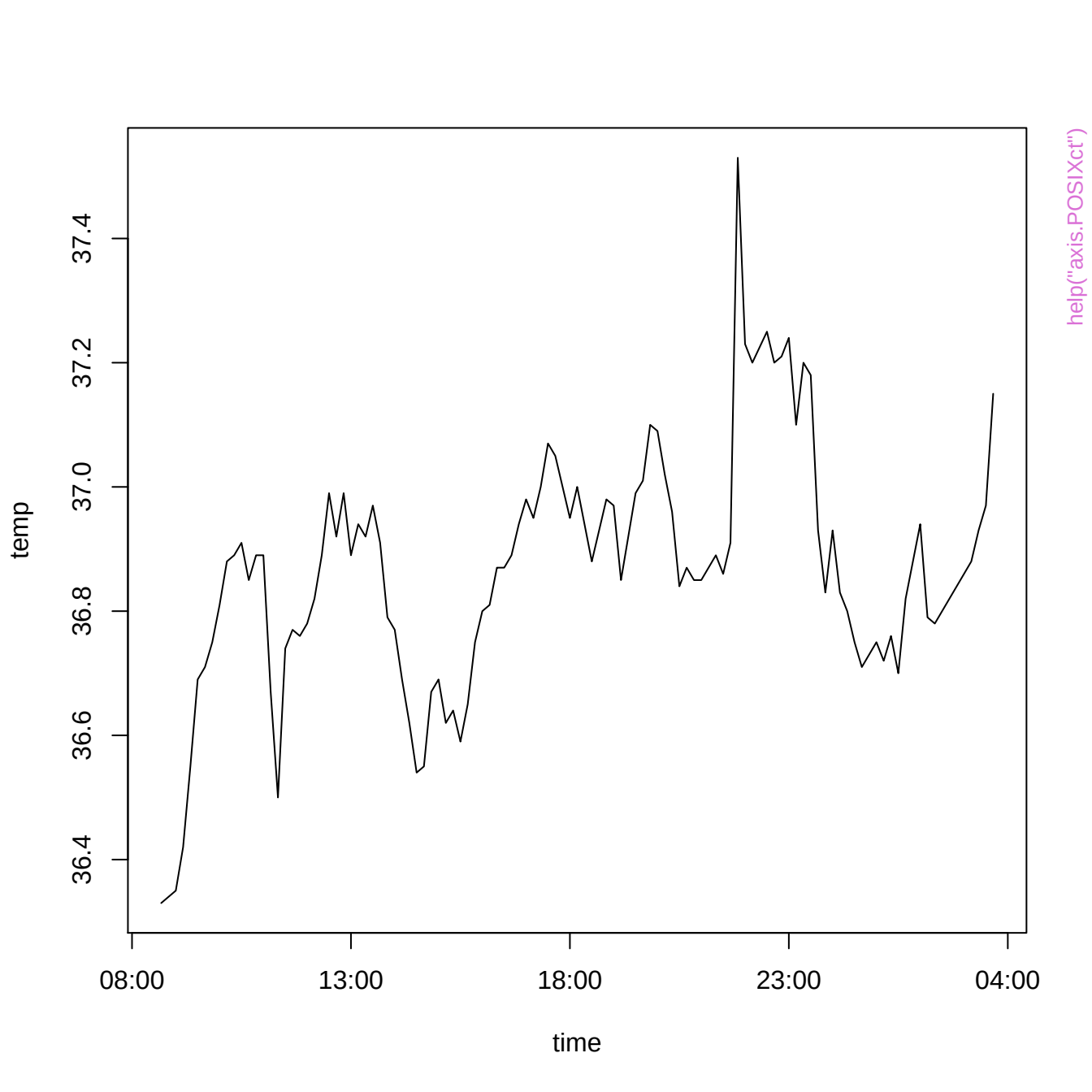


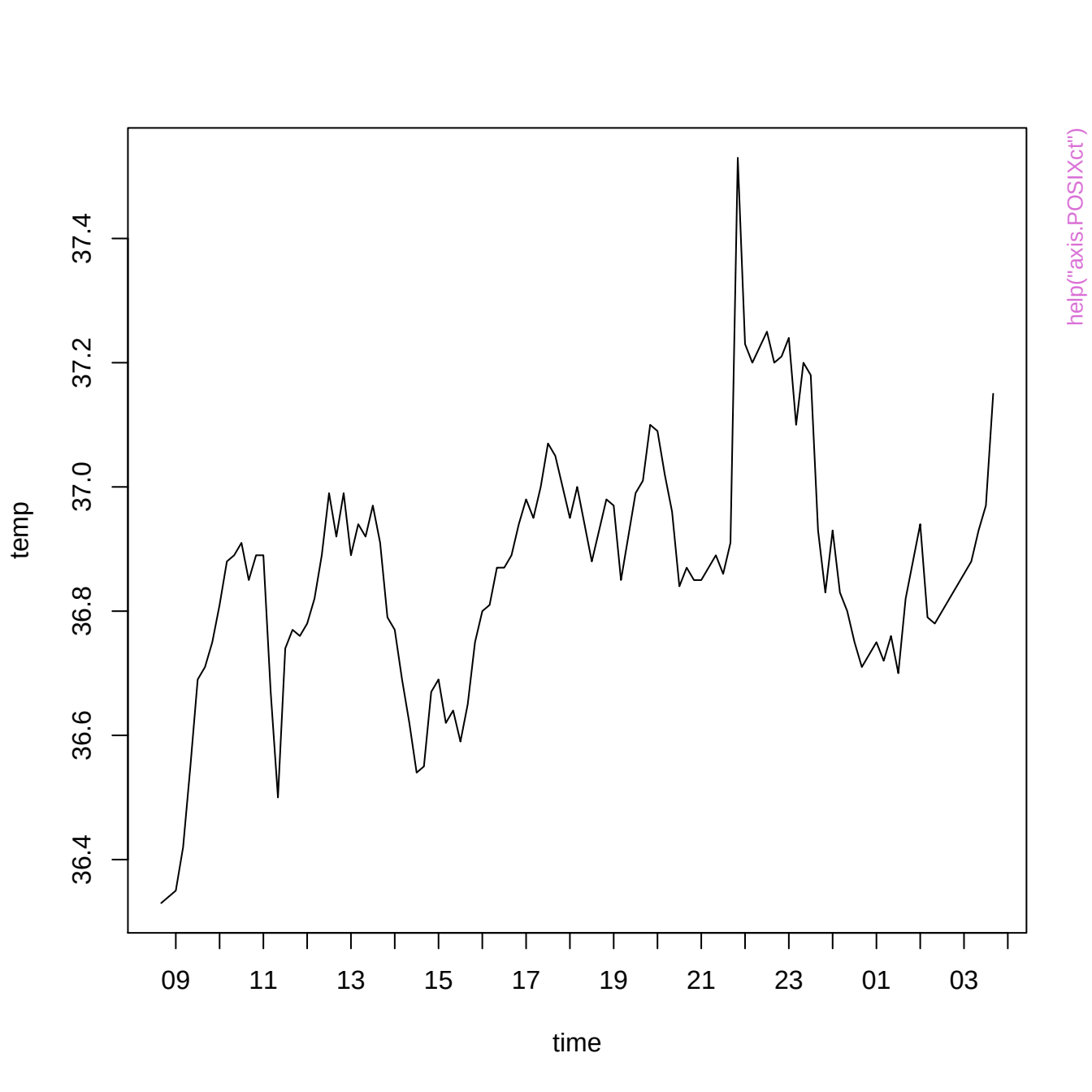



1:14
2
4
6
8
10
12
14
1e−02
1e+01
1e+04
1e+07
1e+10
x
help("axTicks")

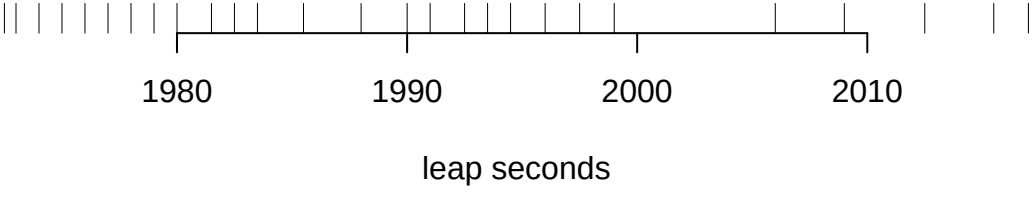

ylims
0.2
0.5
1.0
2.0
5.0
10.0
20.0
50.0
0.0
0.2
0.4
0.6
0.8
1.0
0:1
help("axTicks")


ylims
0.2
0.5
1.0
2.0
5.0
10.0
20.0
50.0
100.0
0.0
0.2
0.4
0.6
0.8
1.0
0:1
help("axTicks")

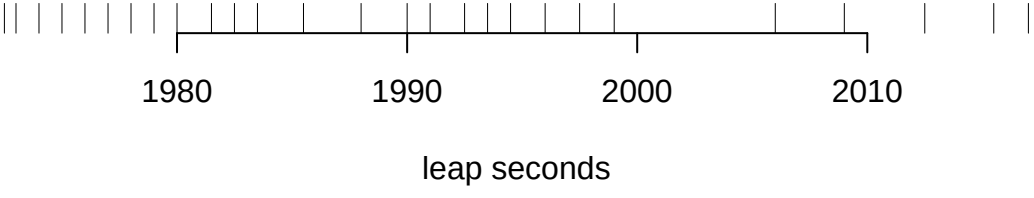

temp
36.4
36.6
36.8
37.0
37.2
37.4
08:00
13:00
18:00
23:00
04:00
time
help("axis.POSIXct")

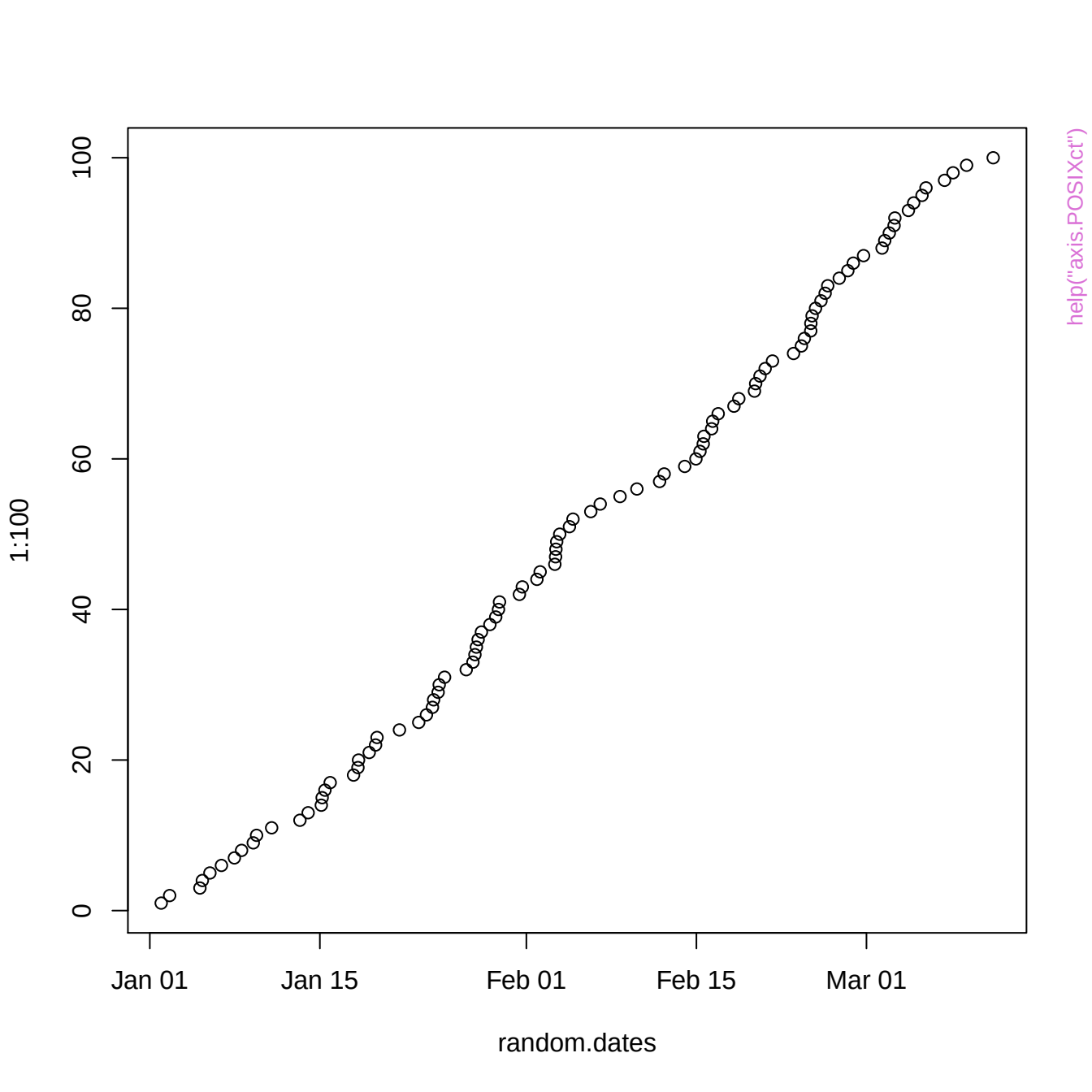

temp
36.4
36.6
36.8
37.0
37.2
37.4
09
11
13
15
17
19
21
23
01
03
time
help("axis.POSIXct")

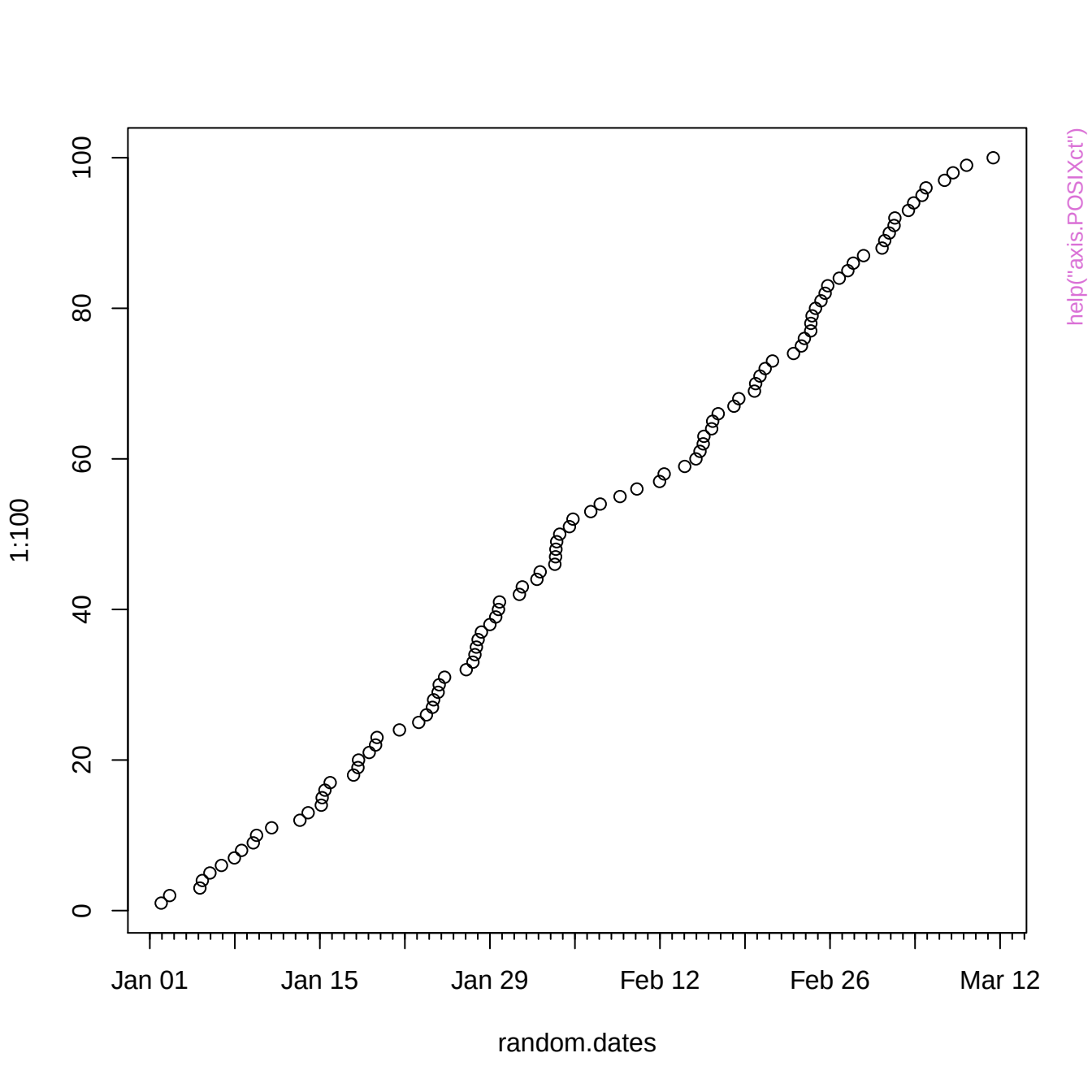
help("axis.POSIXct")

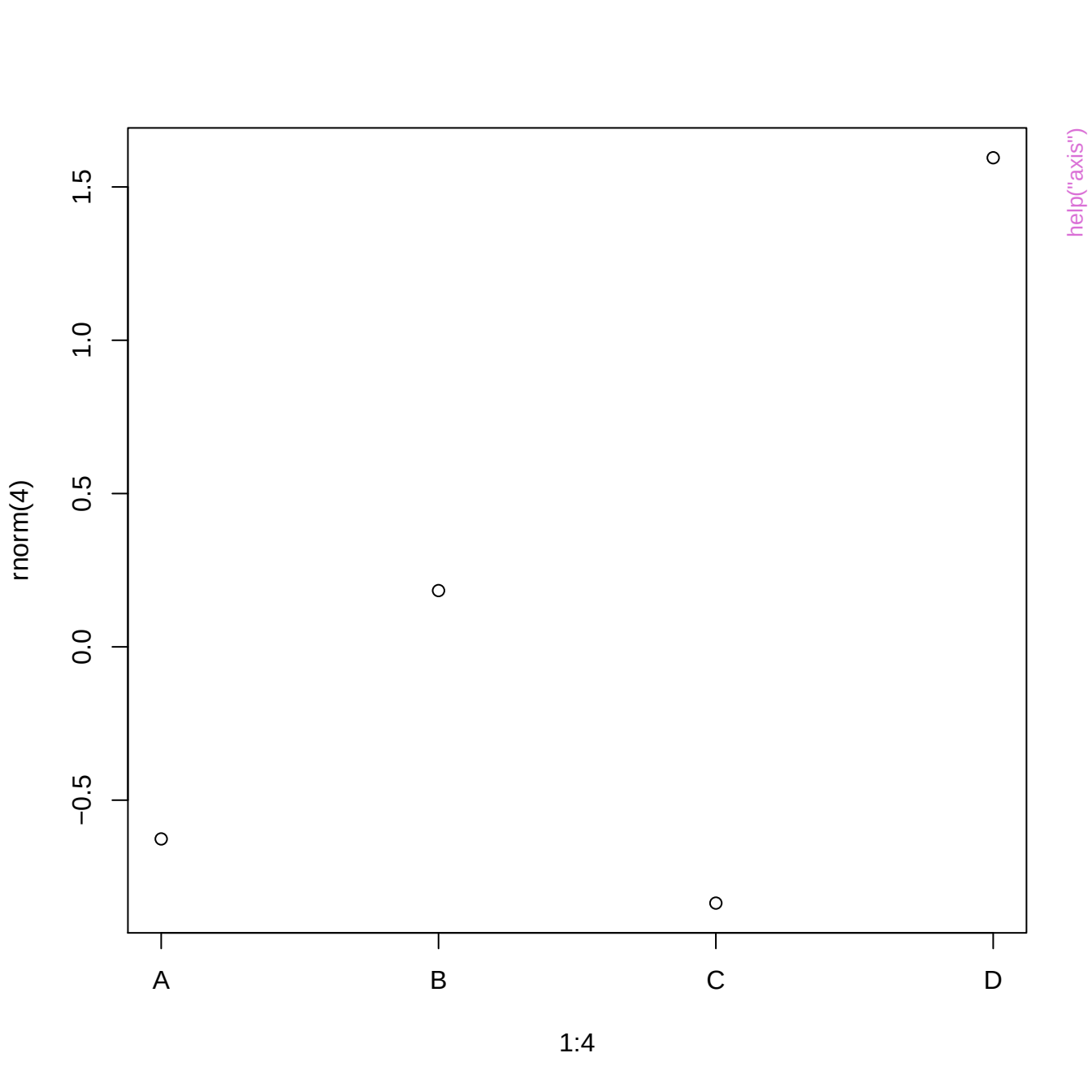


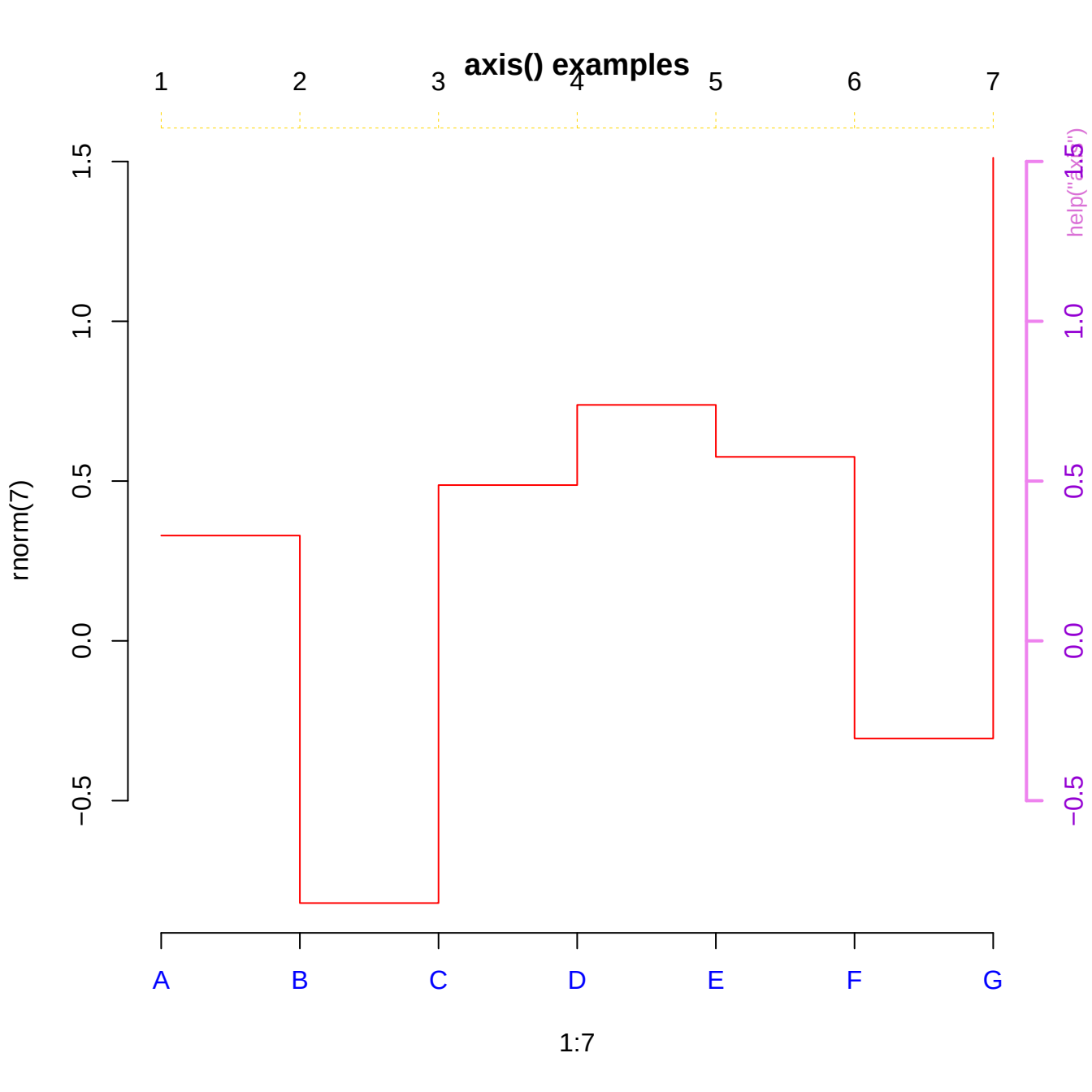
help("axis.POSIXct")



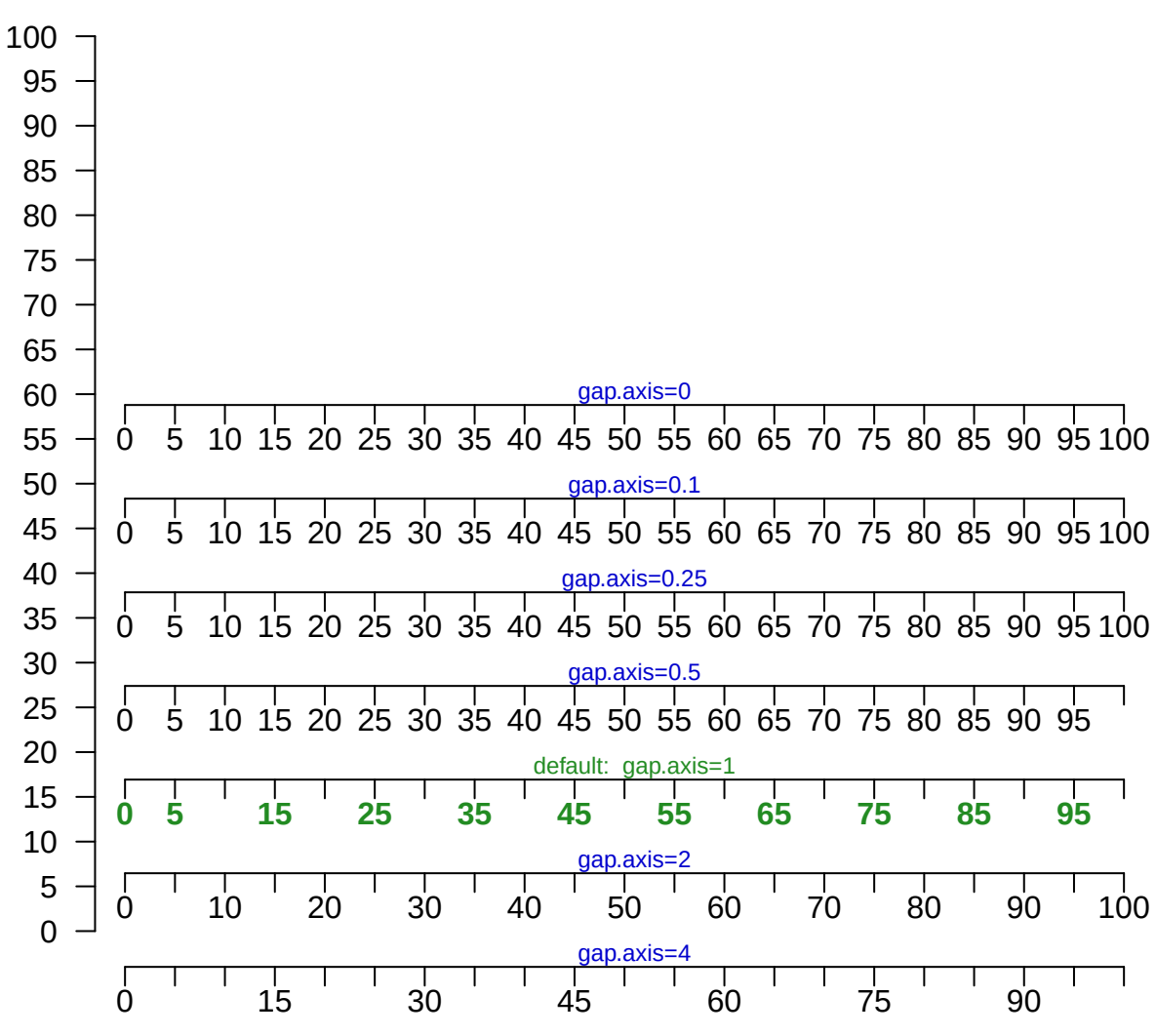

1:100
0
20
40
60
80
100
Jan 01
Jan 15
Feb 01
Feb 15
Mar 01
random.dates
help("axis.POSIXct")

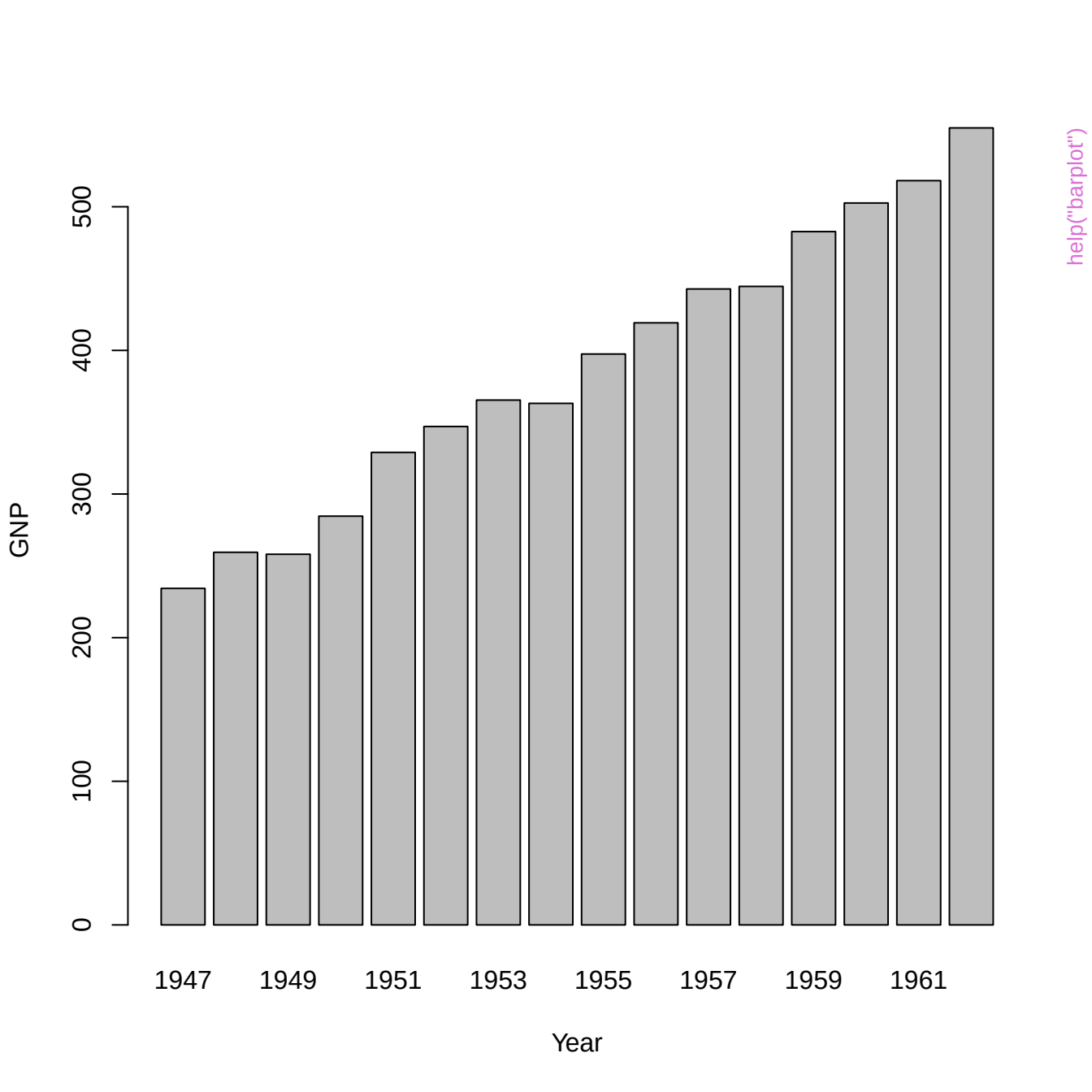

1:100
0
20
40
60
80
100
Jan 01
Jan 15
Jan 29
Feb 12
Feb 26
Mar 12
random.dates
help("axis.POSIXct")

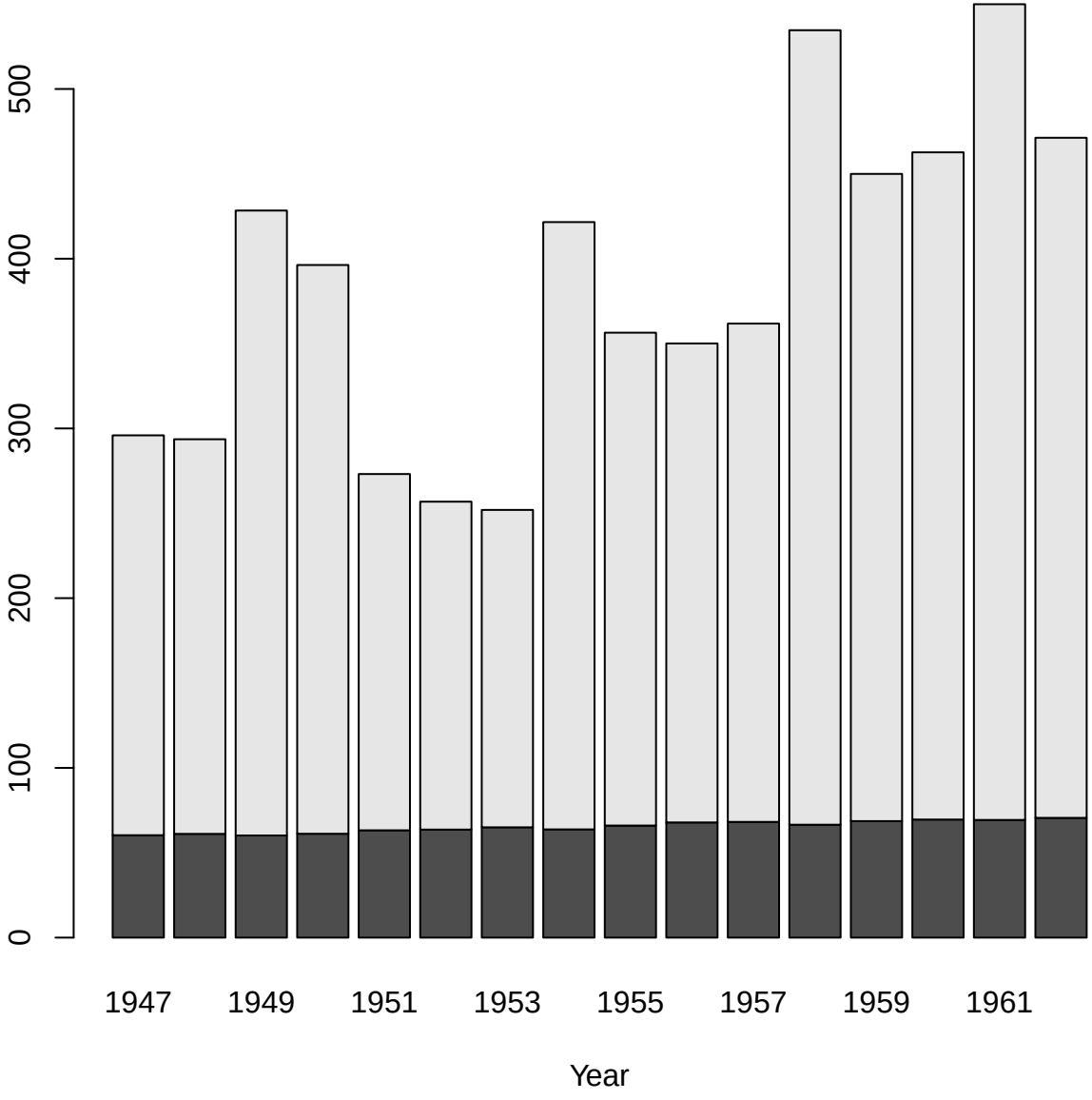

rnorm(4)
1.5
1.0
0.5
0.0
−0.5
A
B
C
D
1:4
help("axis")


axis() examples
1
2
3
4
5
6
7
1.5
1.0
0.5
0.0
−0.5
rnorm(7)
help("axis")
A
B
C
D
E
F
G
1:7

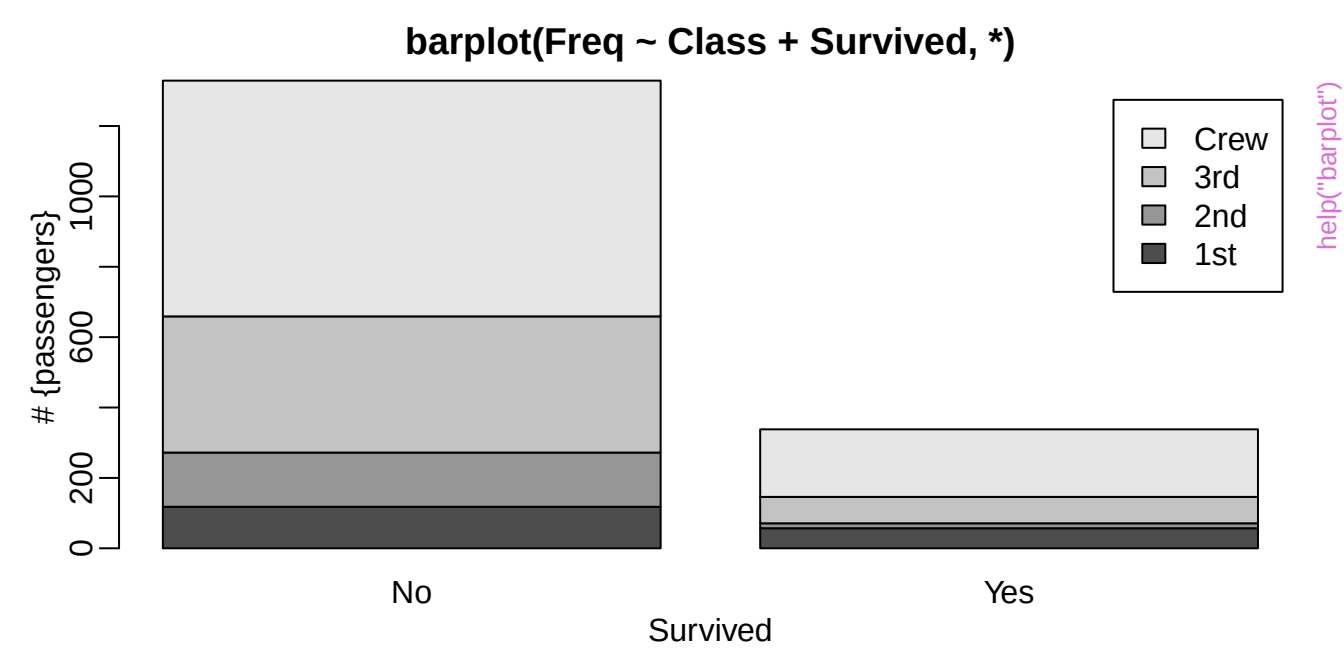
1:10
2
4
6
8
10
2
3
4
5
6
7
8
9
Index
help("axis")

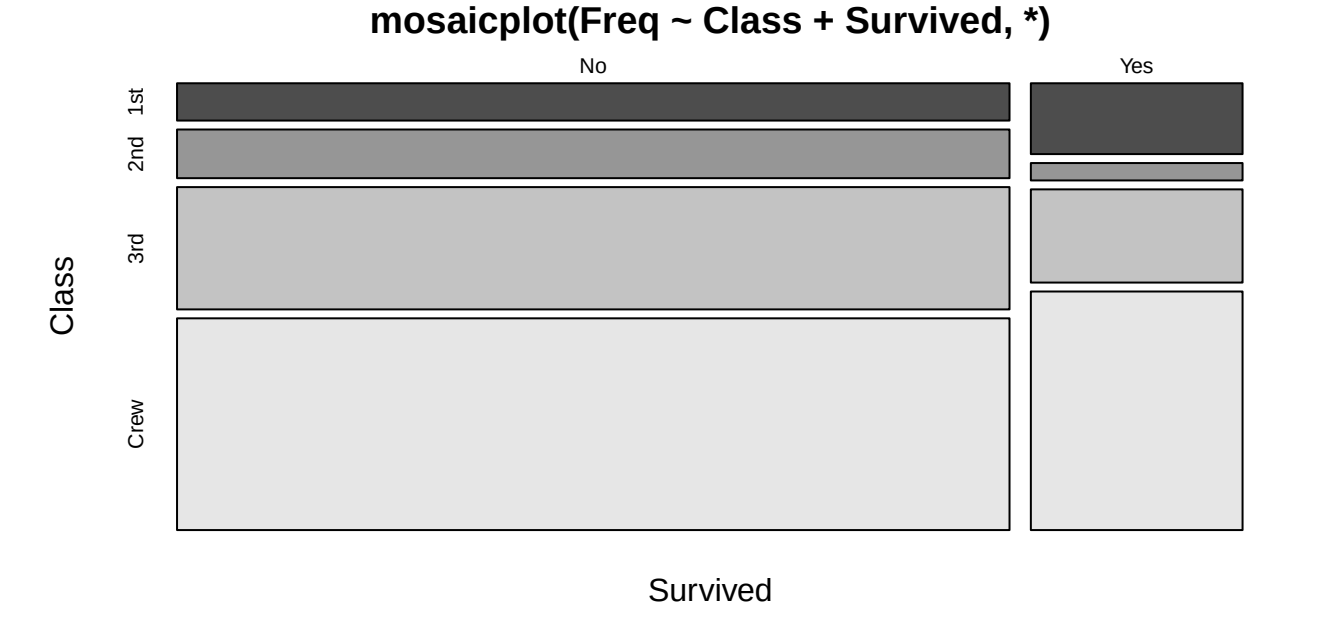

axis(1, .., gap.axis = f), f ≥ 0
help("axis")
gap.axis=0
gap.axis=0.1
gap.axis=0.25
gap.axis=0.5
default: gap.axis=1
gap.axis=2
gap.axis=4

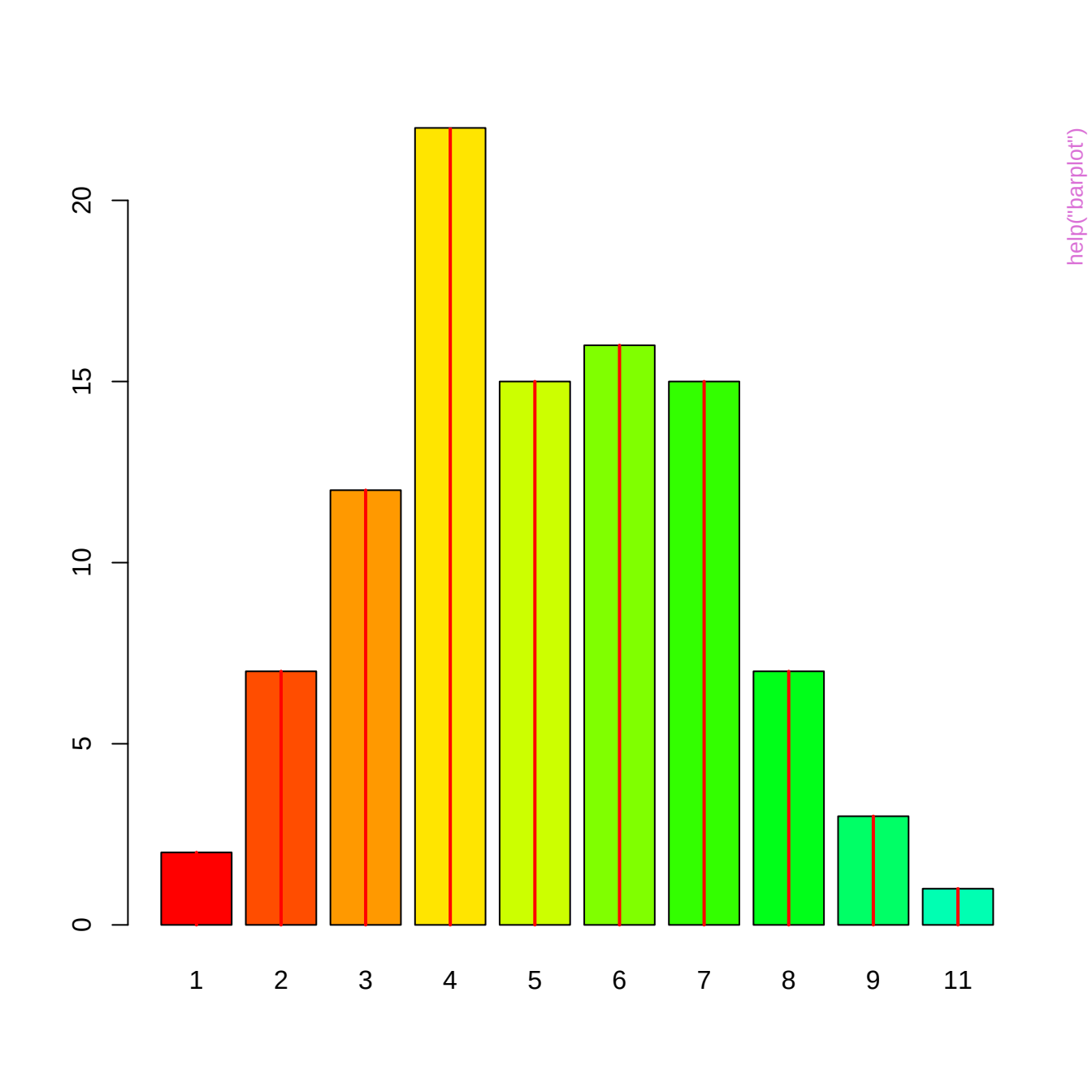

GNP
0
100
200
300
400
500
1947
1949
1951
1953
1955
1957
1959
1961
Year
help("barplot")

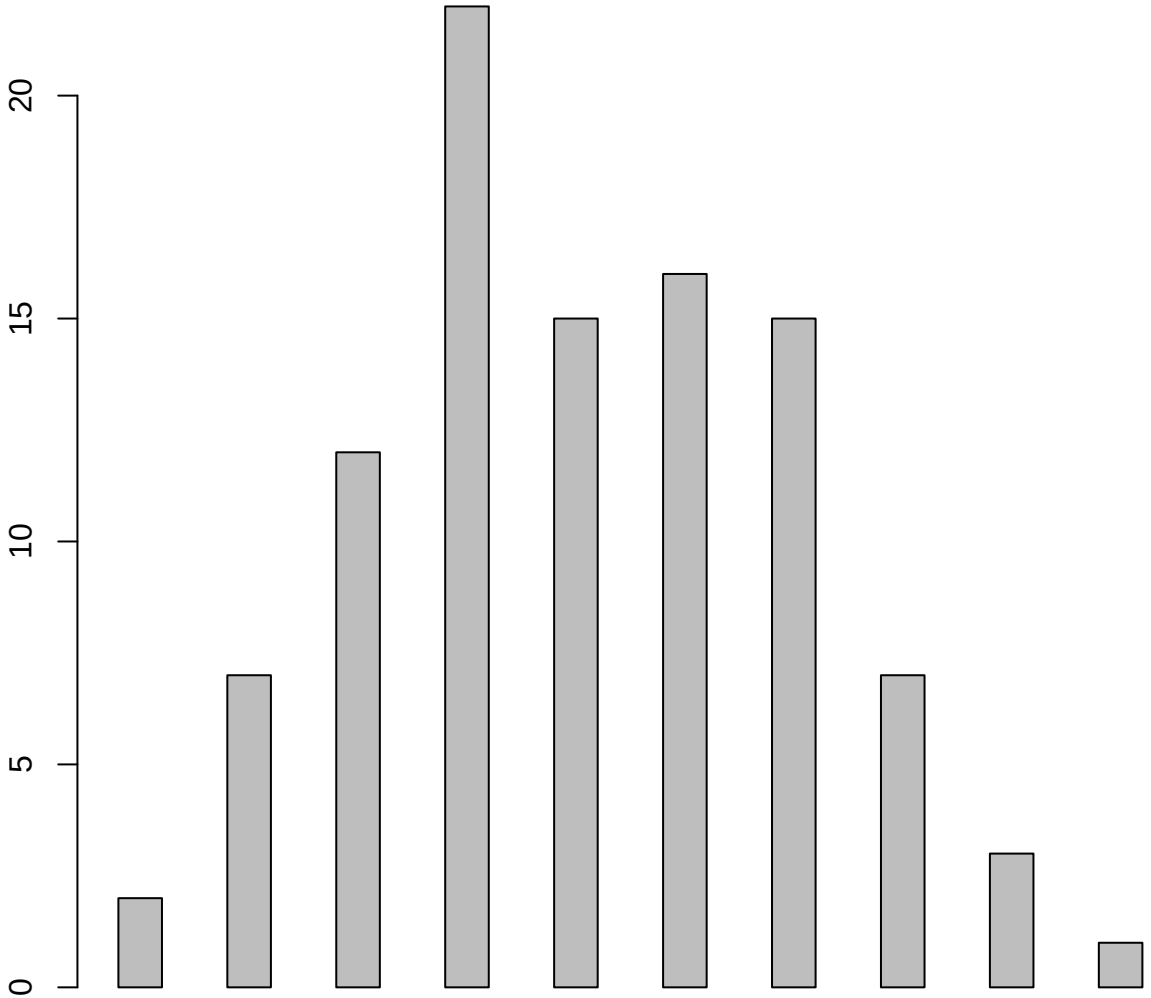


help("barplot")


barplot(Freq ~ Class + Survived, *)
help("barplot")
Crew
3rd
2nd
1st
{passengers}
0
200
600
1000
No
Yes
Survived

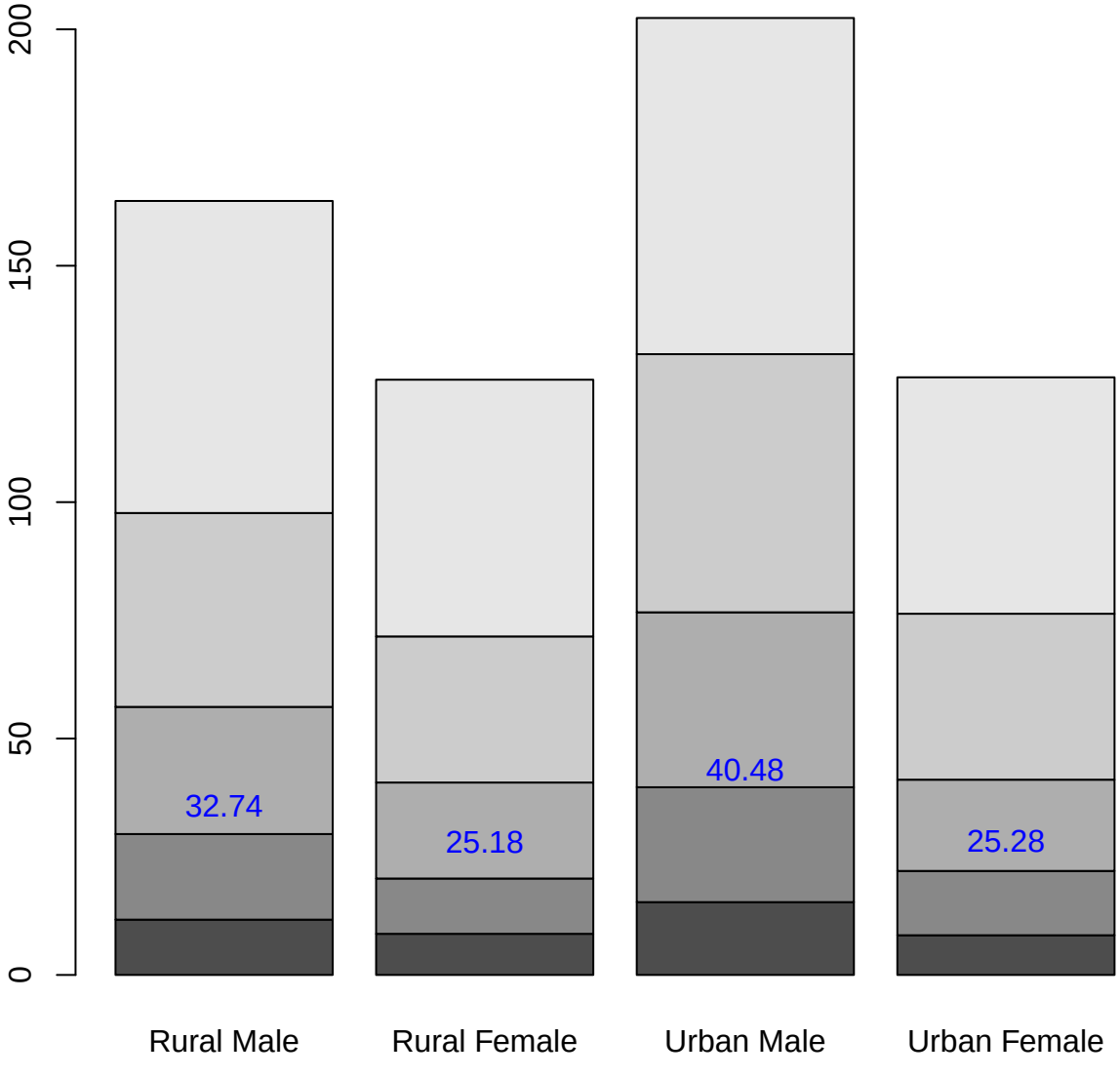

mosaicplot(Freq ~ Class + Survived, *)
No
Yes
1st
2nd
3rd
Crew
Class
Survived

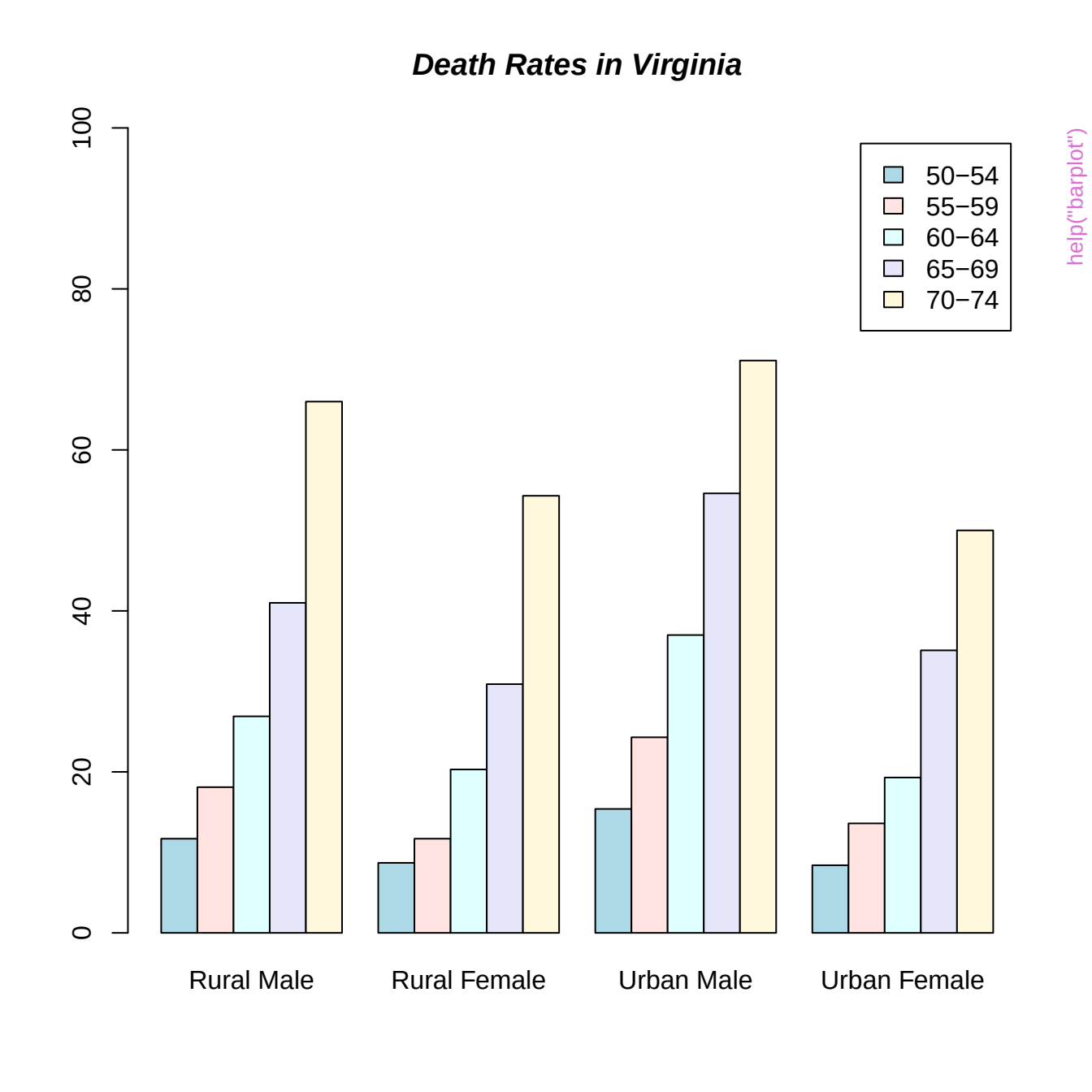

0
5
10
15
20
1
2
3
4
5
6
7
8
9
11
help("barplot")

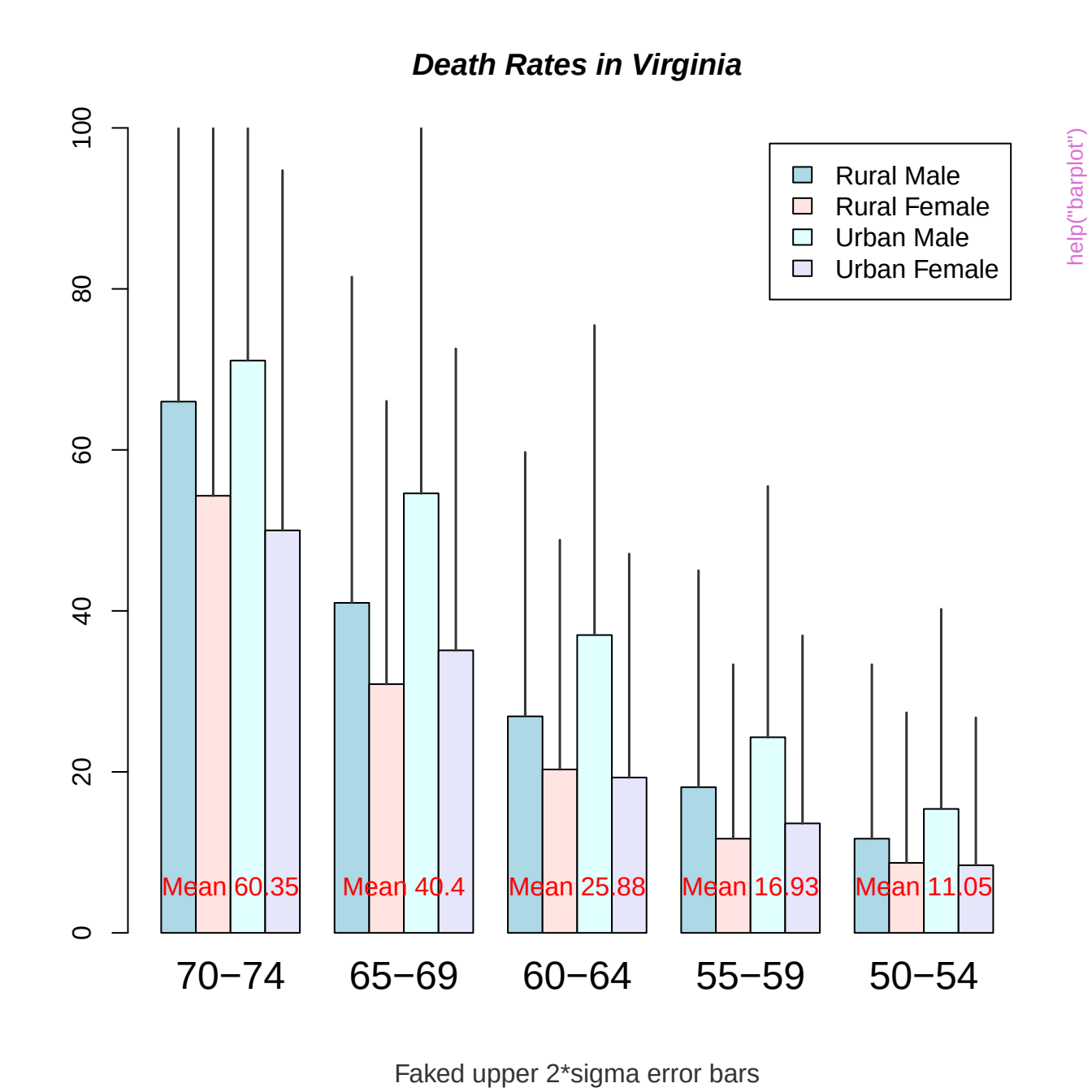


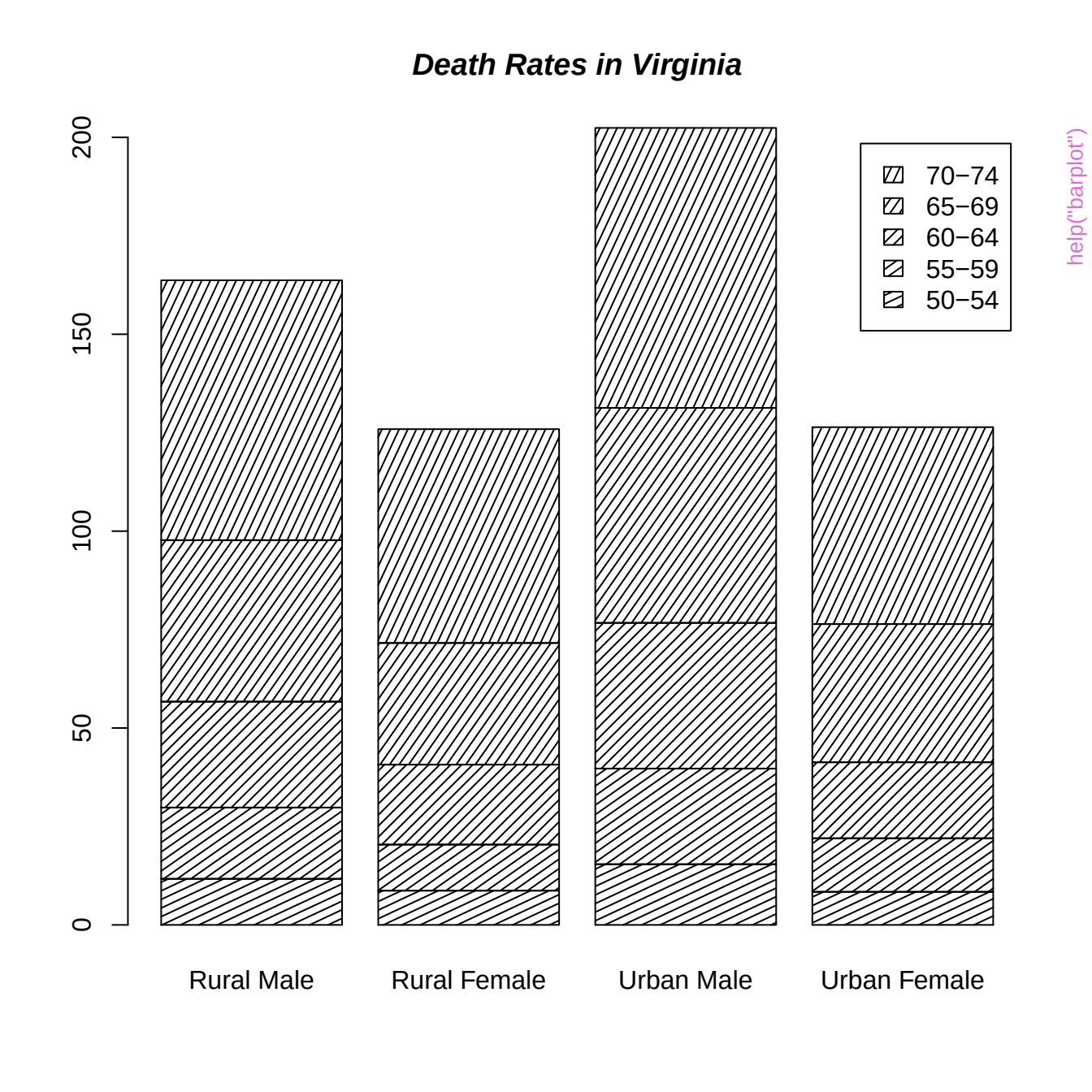
help("barplot")

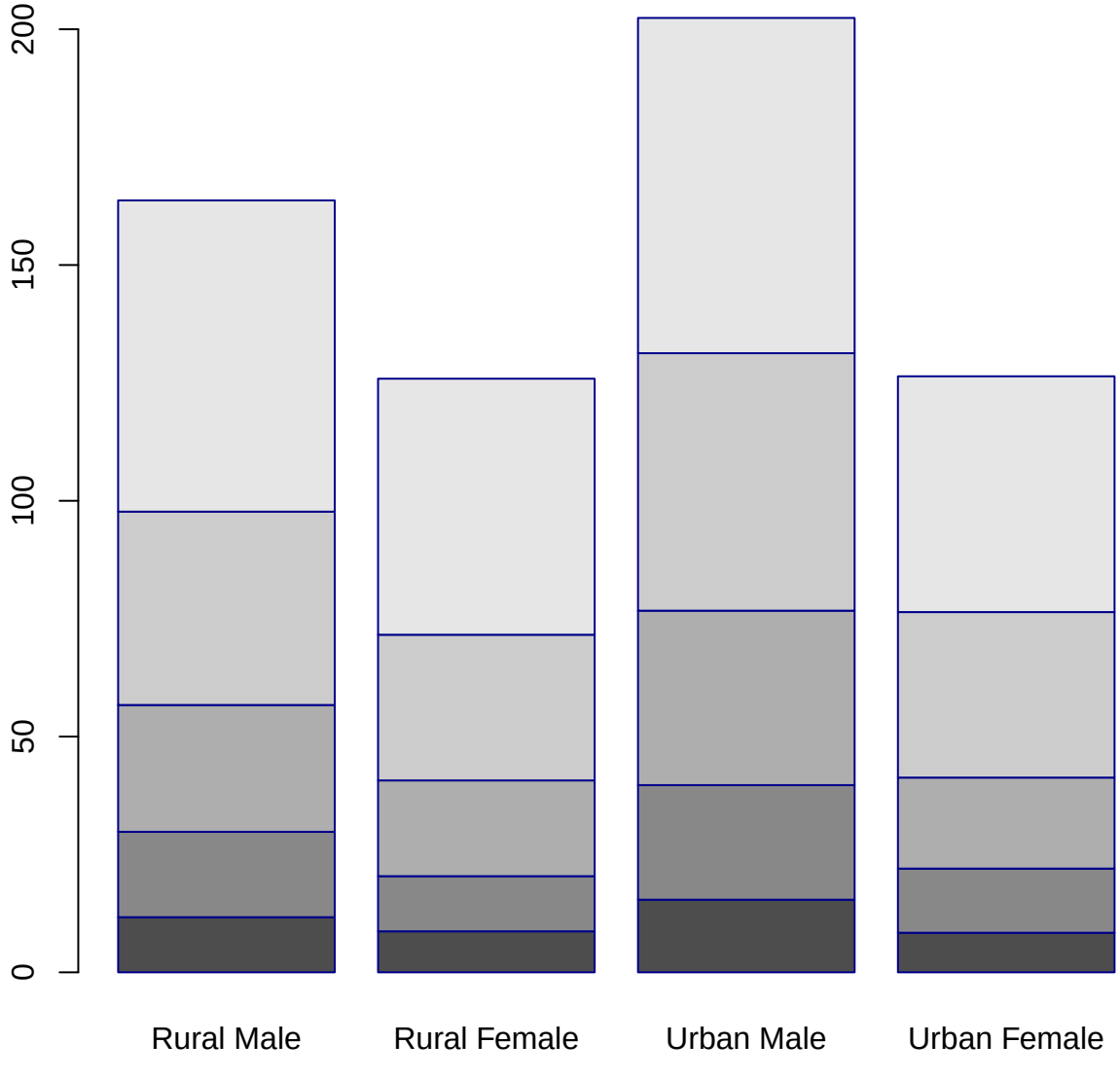
barplot(..., space= 1.5, axisnames = FALSE)

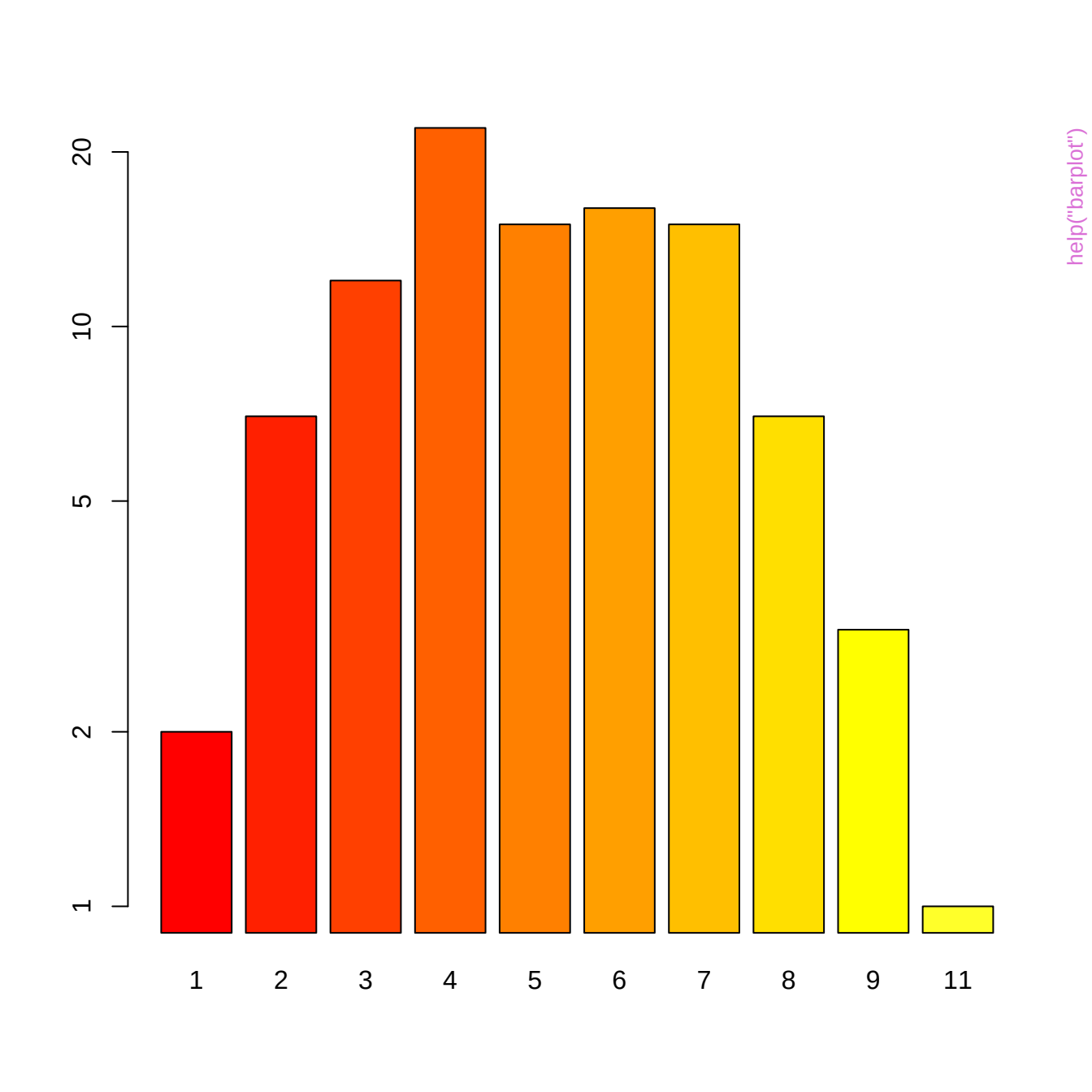

0
50
100
150
200
32.74
25.18
40.48
25.28
Rural Male
Rural Female
Urban Male
Urban Female
help("barplot")

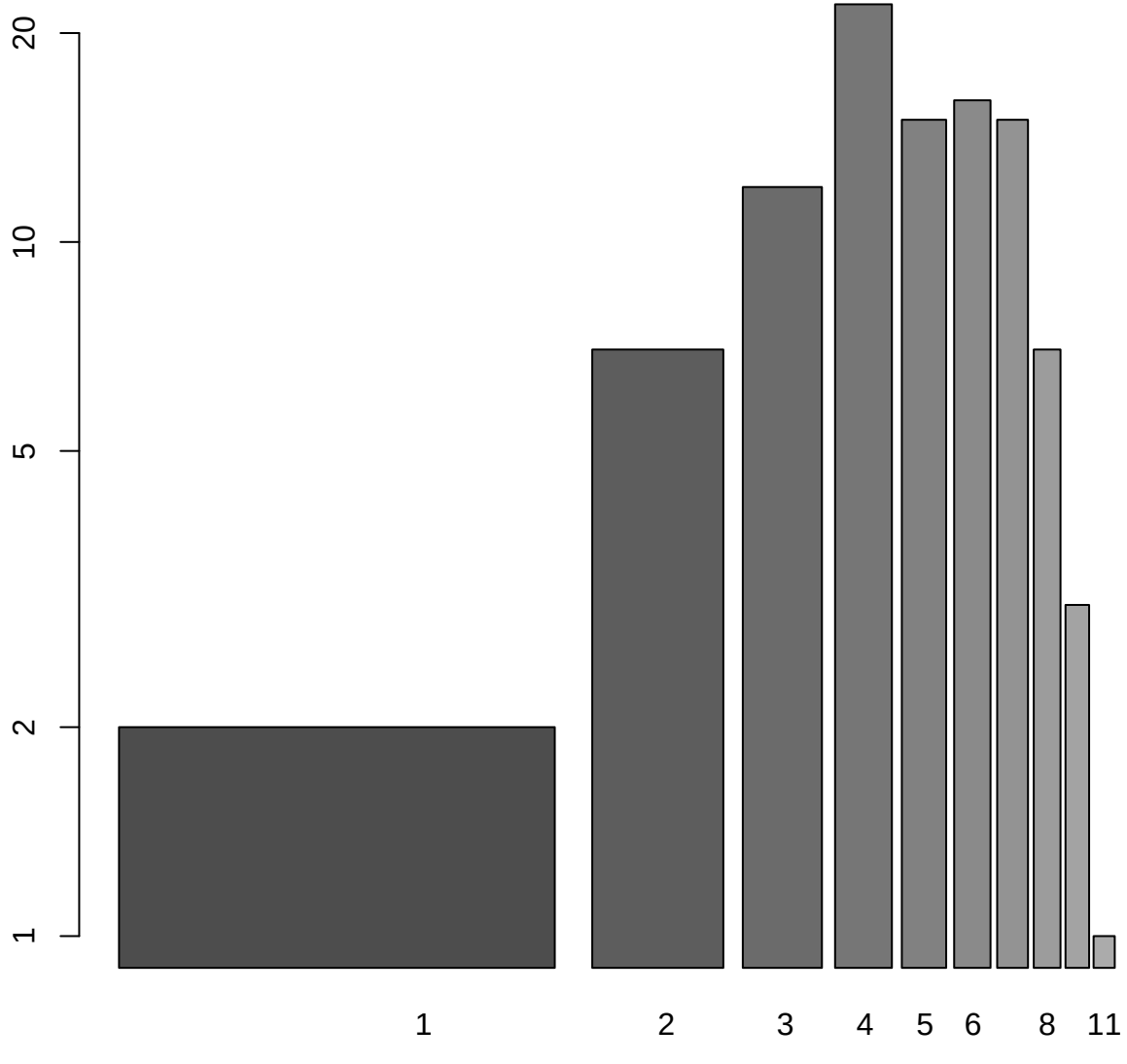

Death Rates in Virginia
100
80
60
40
20
0
50−54
55−59
60−64
65−69
70−74
Rural Male
Rural Female
Urban Male
Urban Female
help("barplot")


Death Rates in Virginia
Rural Male
Rural Female
Urban Male
Urban Female
0
20
40
60
80
100
Mean 60.35
Mean 40.4
Mean 25.88
Mean 16.93
Mean 11.05
70−74
65−69
60−64
55−59
50−54
Faked upper 2*sigma error bars
help("barplot")

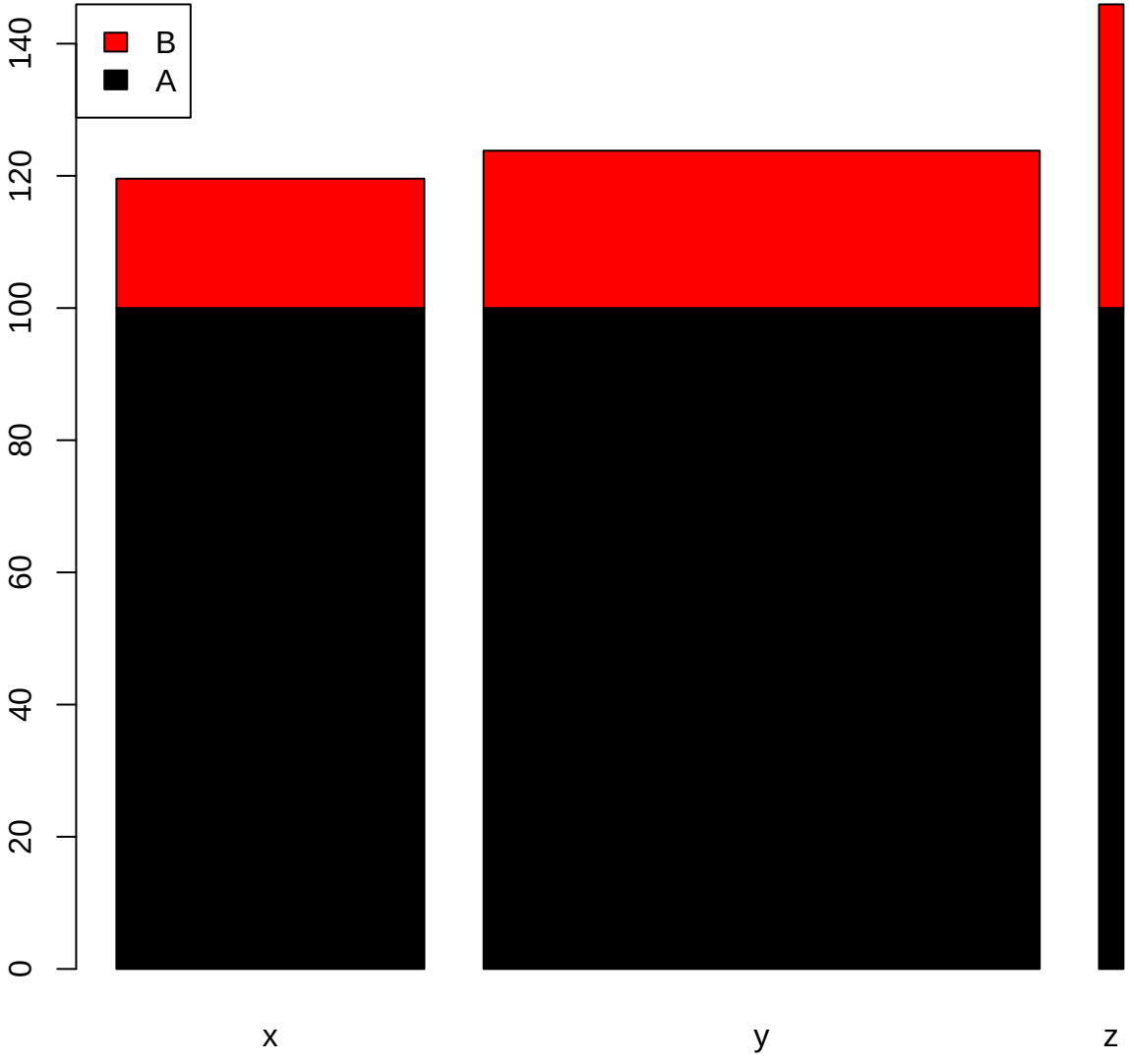

Death Rates in Virginia
200
150
100
50
0
70−74
65−69
60−64
55−59
50−54
Rural Male
Rural Female
Urban Male
Urban Female
help("barplot")


0
50
100
150
200
Rural Male
Rural Female
Urban Male
Urban Female
help("barplot")

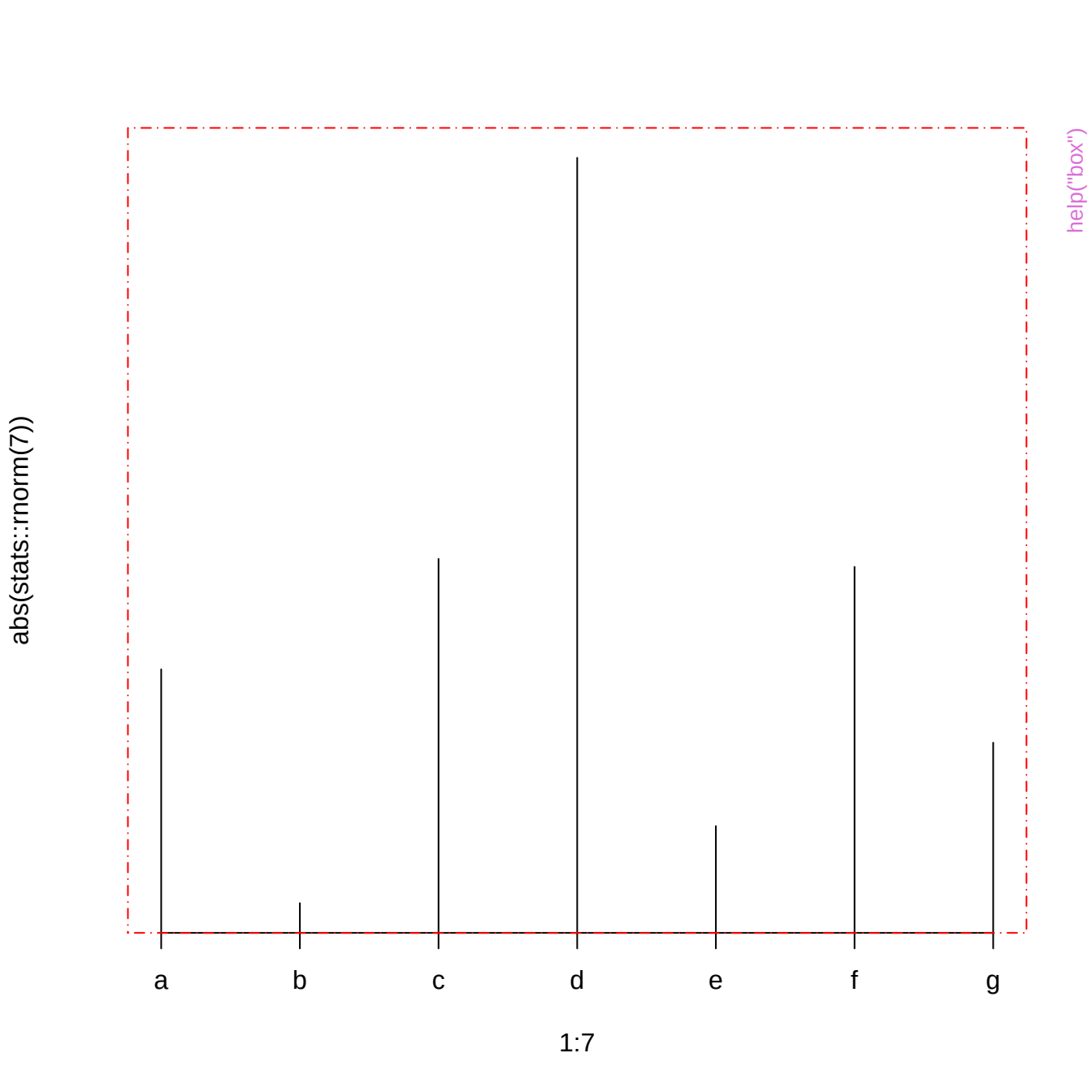

1
2
5
10
20
1
2
3
4
5
6
7
8
9
11
help("barplot")

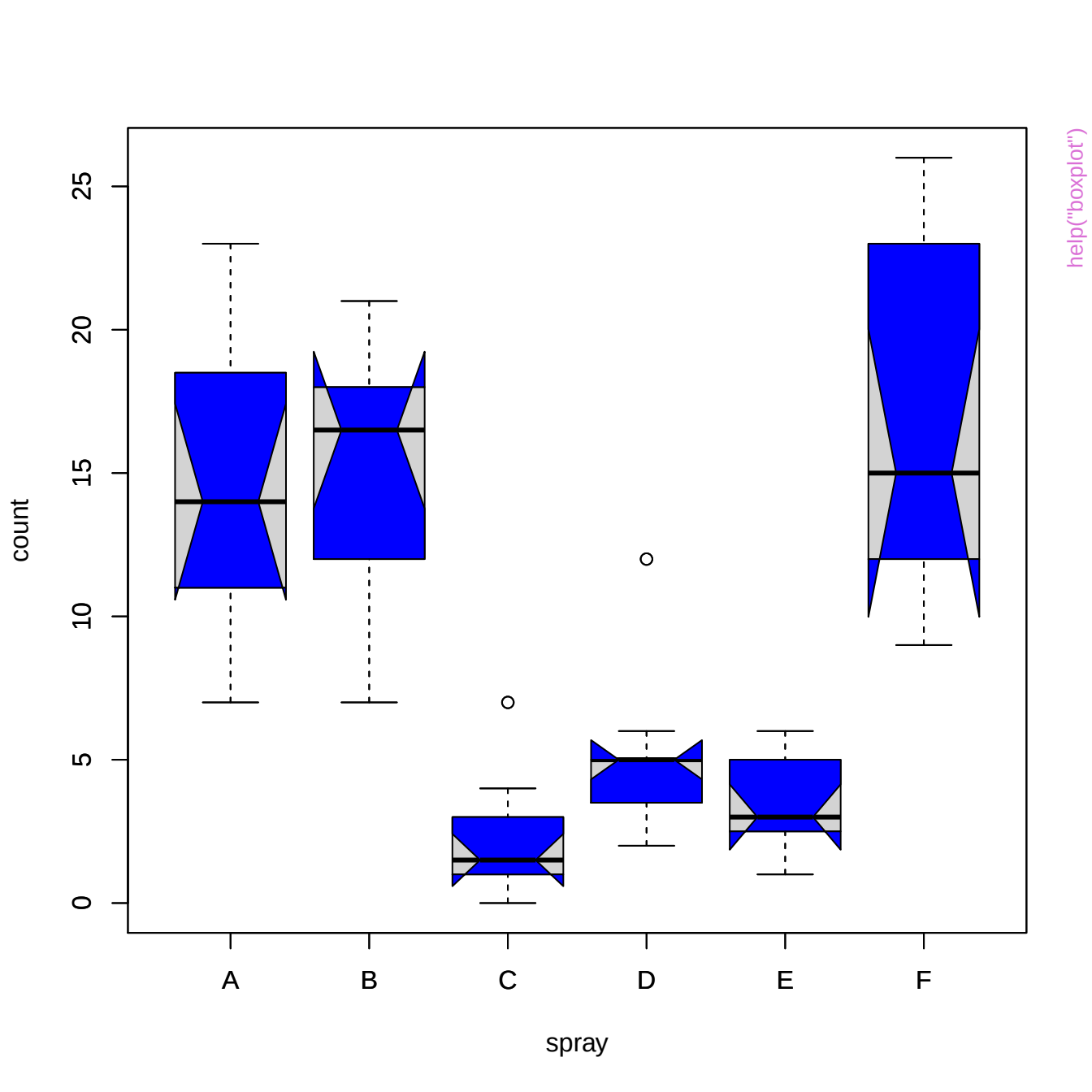


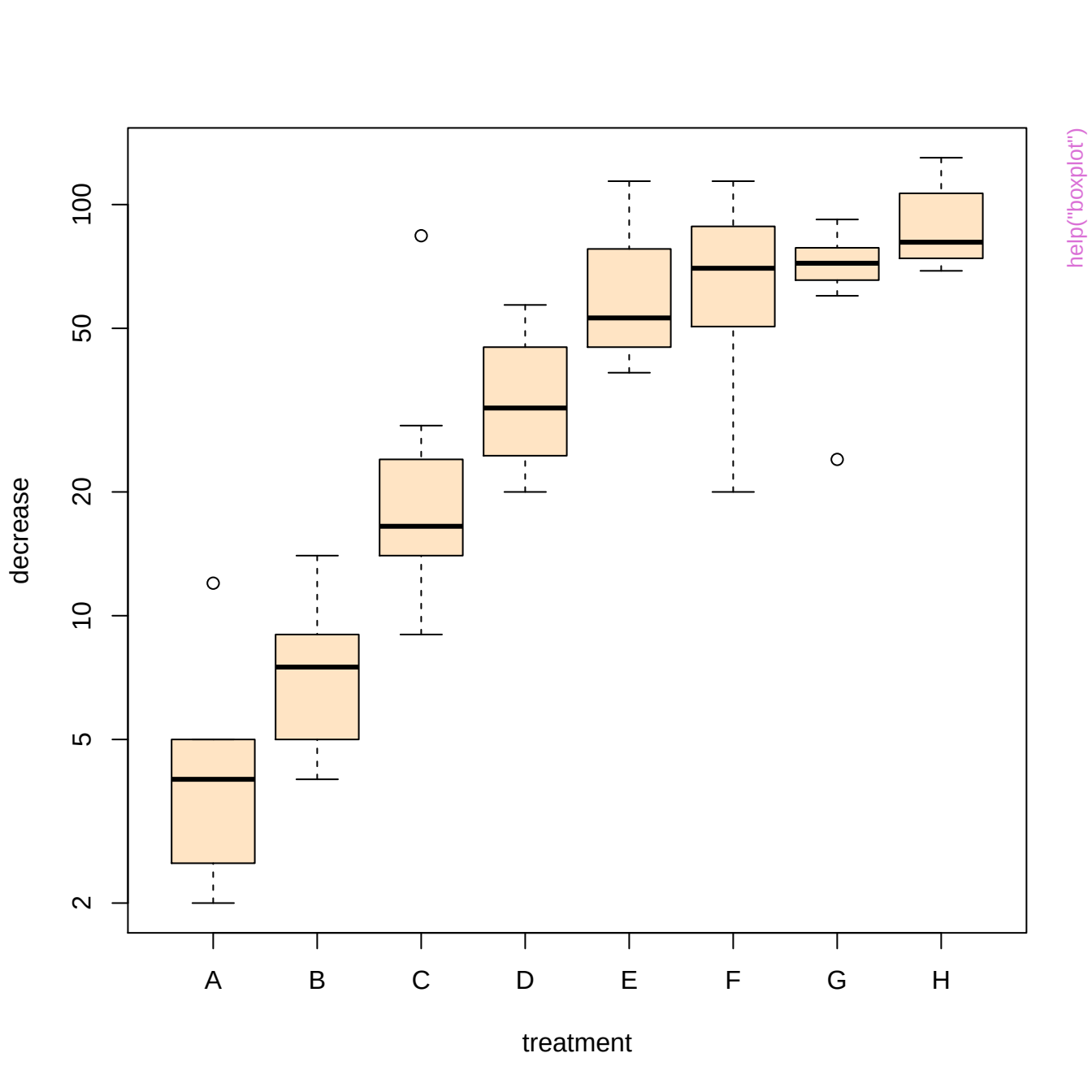
help("barplot")

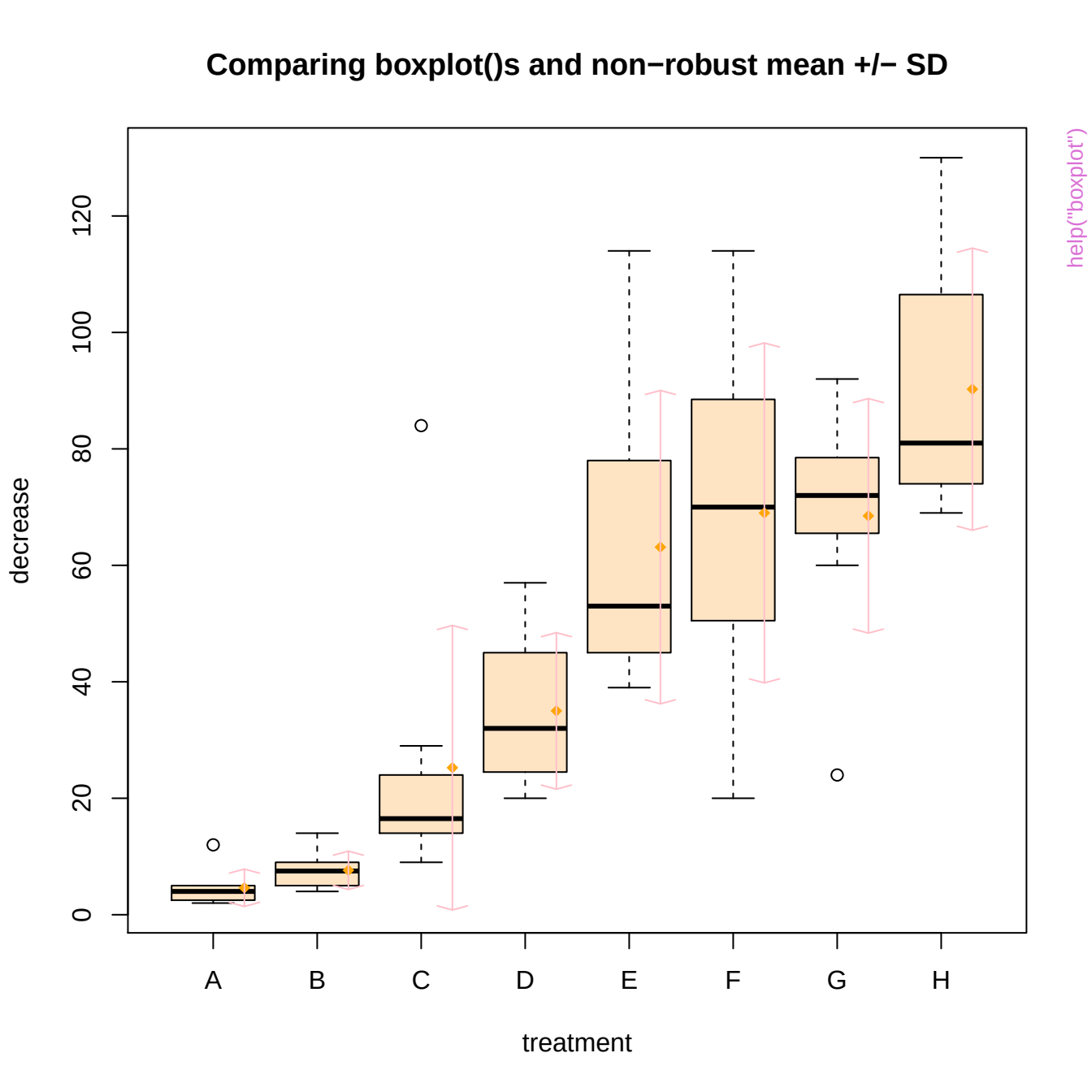


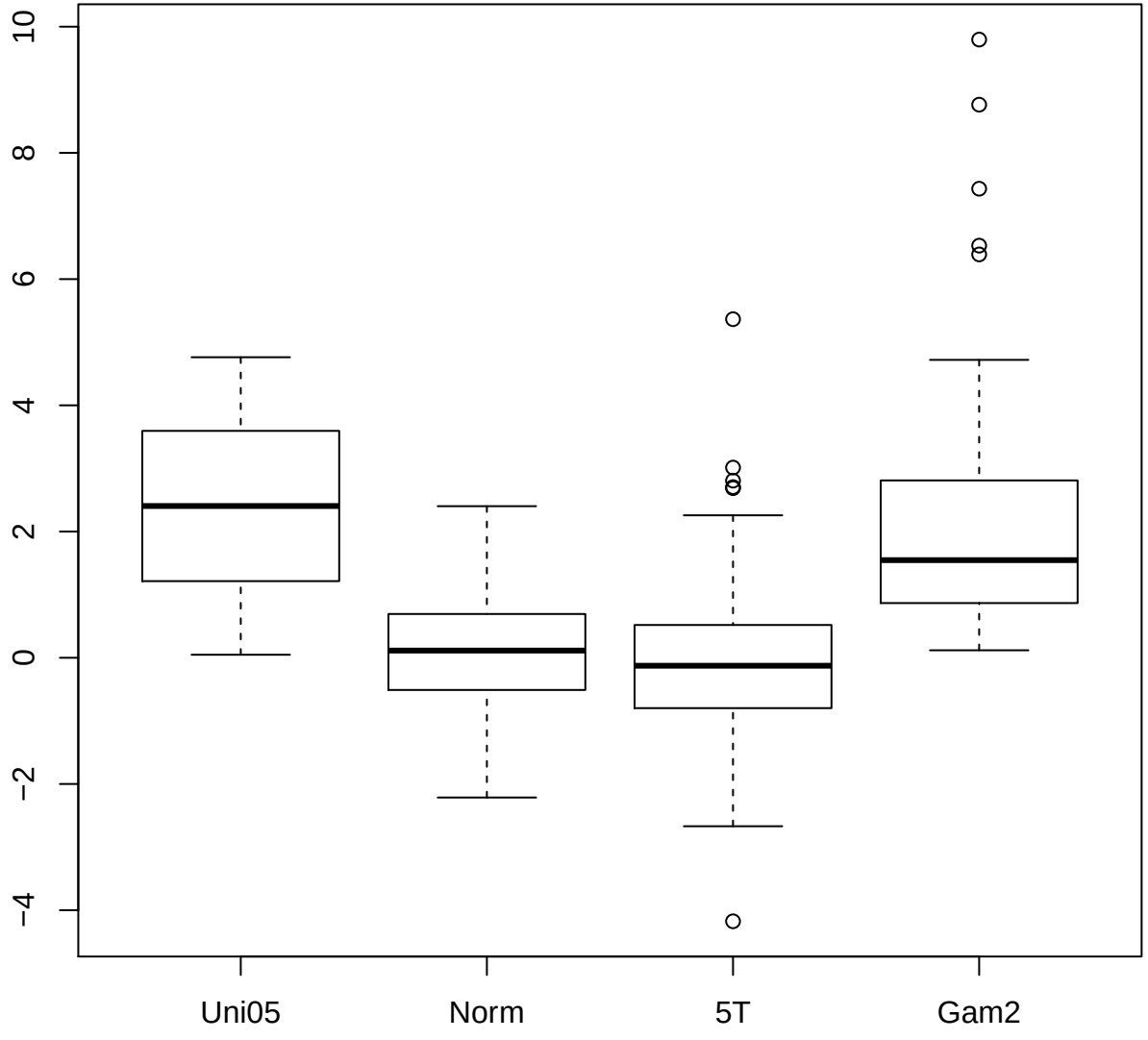
help("barplot")


abs(stats::rnorm(7))
a
b
c
d
e
f
g
1:7
help("box")

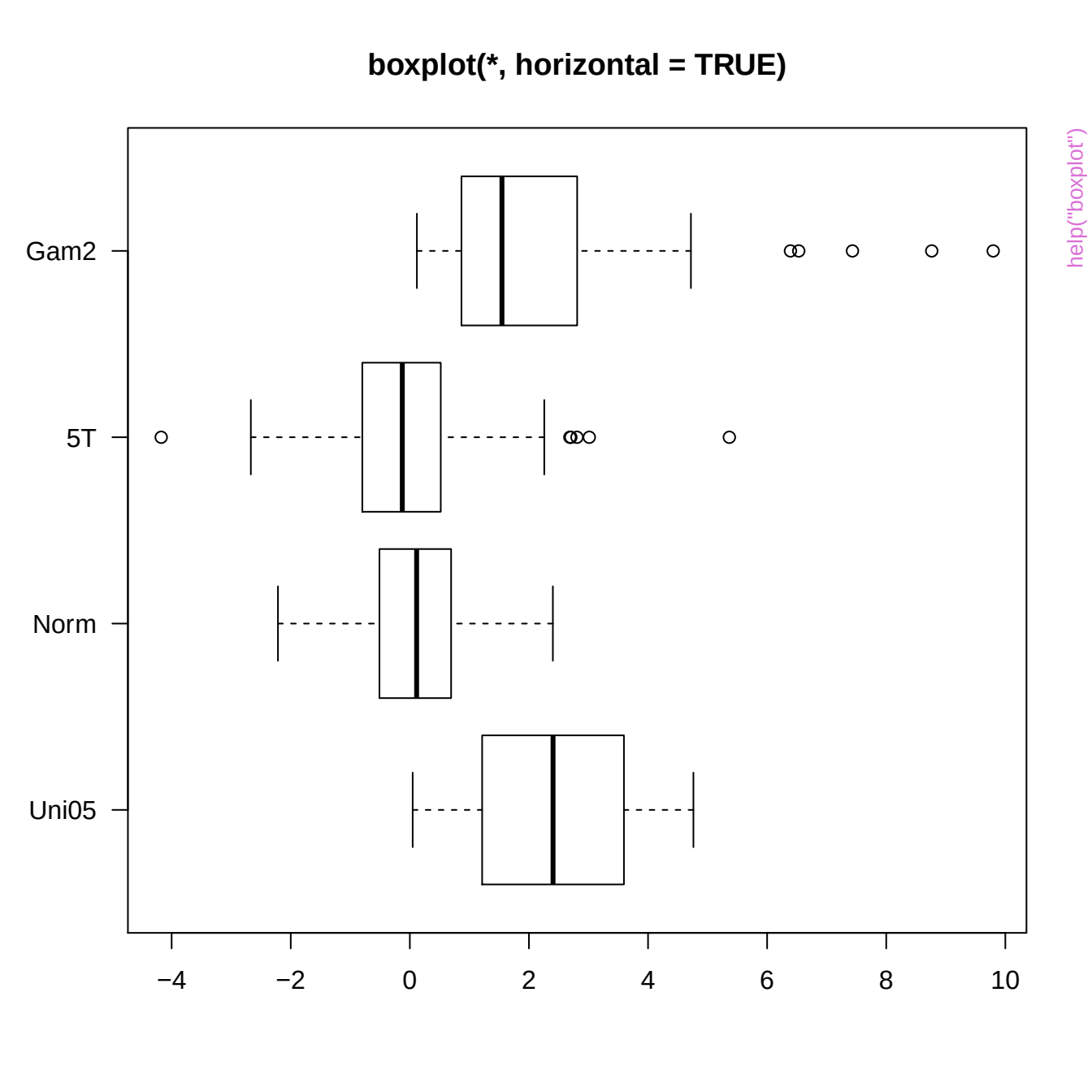

count
0
5
10
15
20
25
A
B
C
D
E
F
spray
help("boxplot")

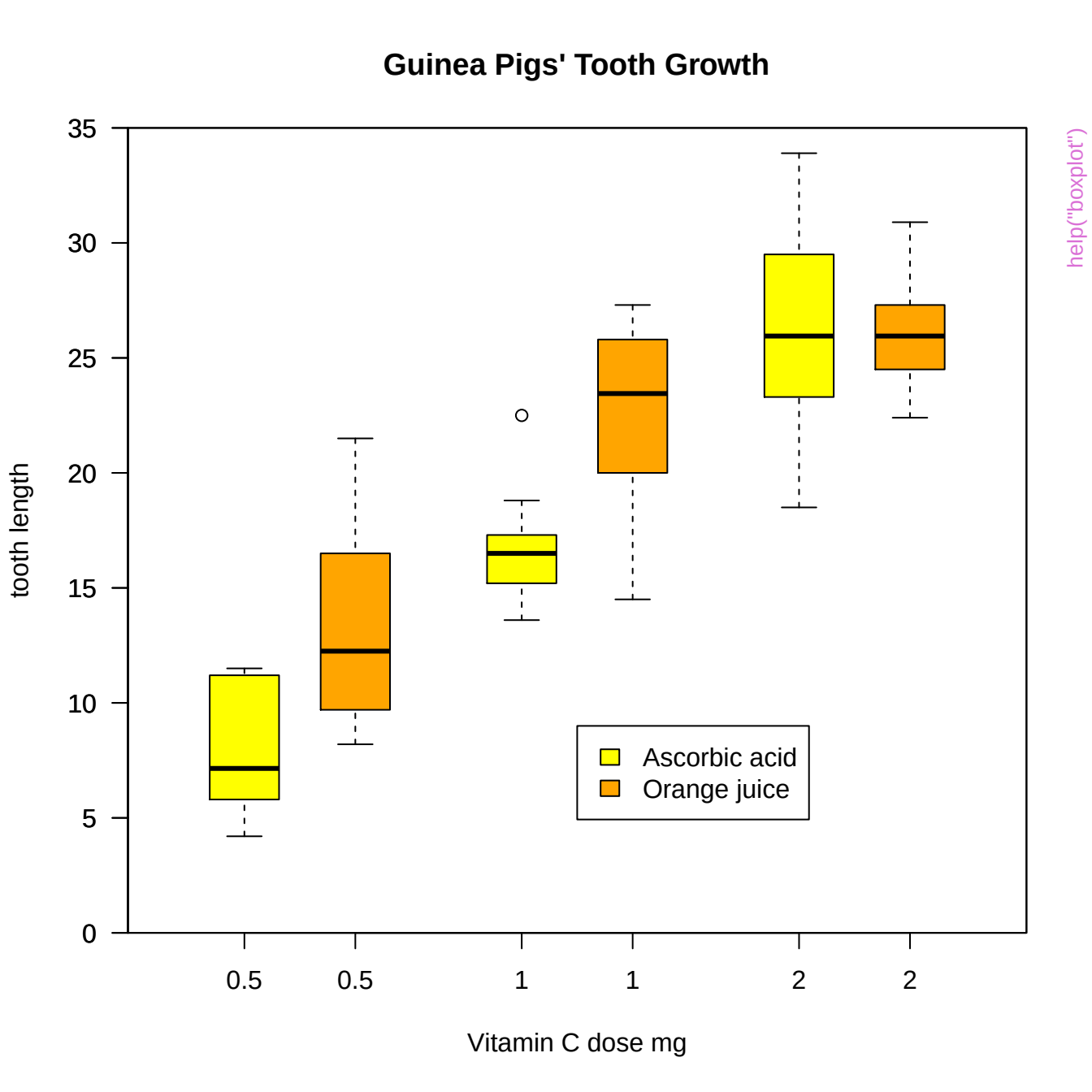

decrease
2
5
10
20
50
100
A
B
C
D
E
F
G
H
treatment
help("boxplot")

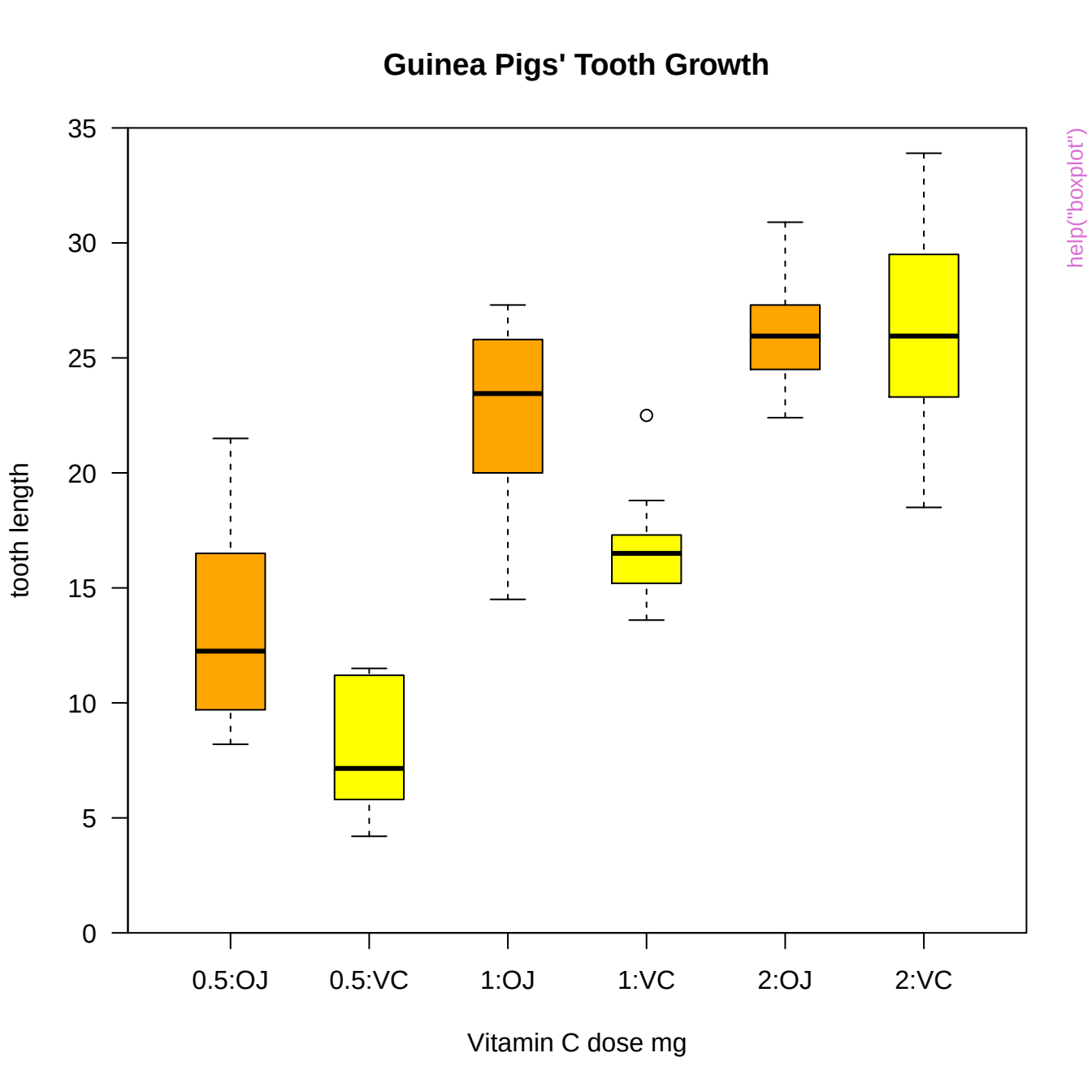

Comparing boxplot()s and non−robust mean +/− SD
decrease
0
20
40
60
80
100
120
A
B
C
D
E
F
G
H
treatment
help("boxplot")

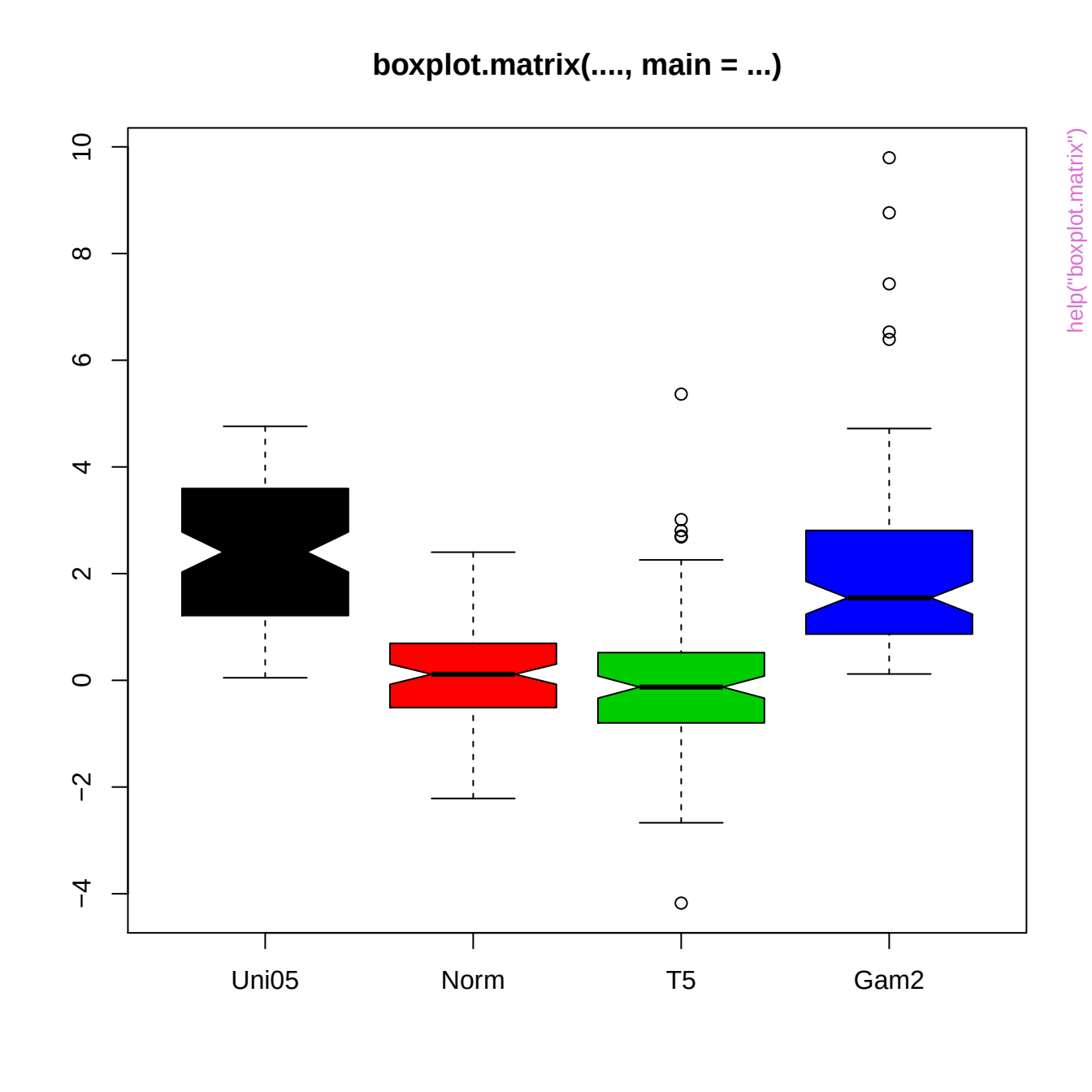


help("boxplot")

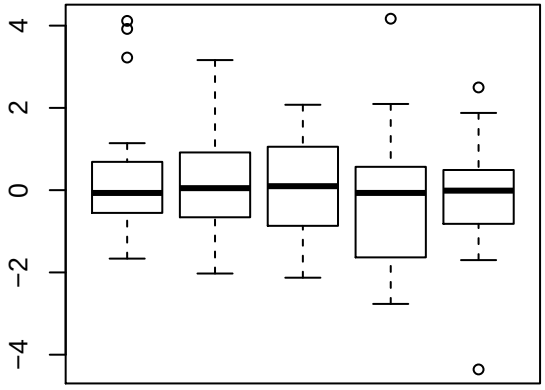

boxplot(*, horizontal = TRUE)
Gam2
5T
Norm
Uni05
−4
−2
0
2
4
6
8
10
help("boxplot")

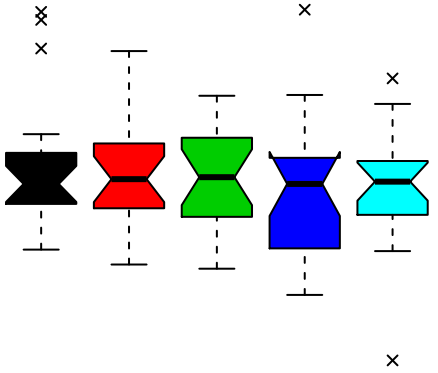

Guinea Pigs' Tooth Growth
tooth length
35
30
25
20
15
10
5
0
0.5
0.5
1
1
2
2
Vitamin C dose mg
Ascorbic acid
Orange juice
help("boxplot")


Guinea Pigs' Tooth Growth
tooth length
0
5
10
15
20
25
30
35
0.5:OJ
0.5:VC
1:OJ
1:VC
2:OJ
2:VC
Vitamin C dose mg
help("boxplot")


boxplot.matrix(...., main = ...)
10
8
6
4
2
0
−2
−4
Uni05
Norm
T5
Gam2
help("boxplot.matrix")

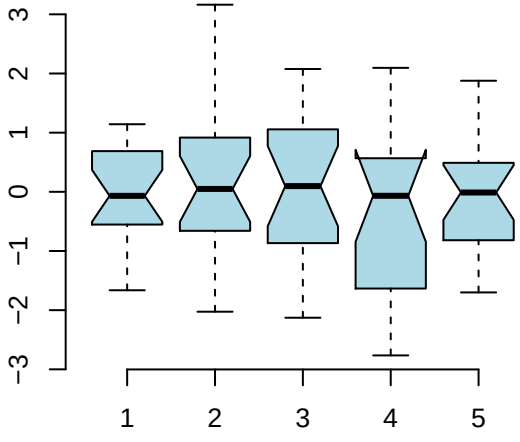
help("bxp")



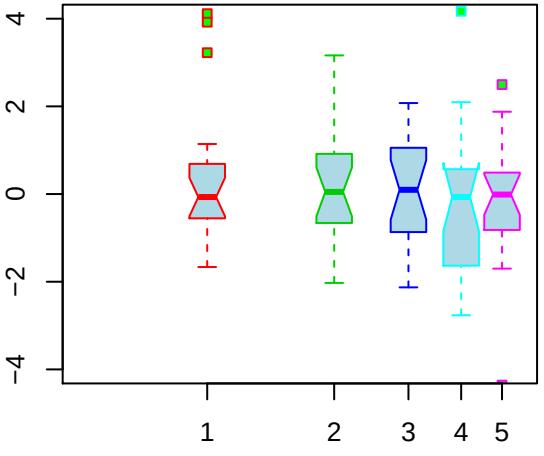


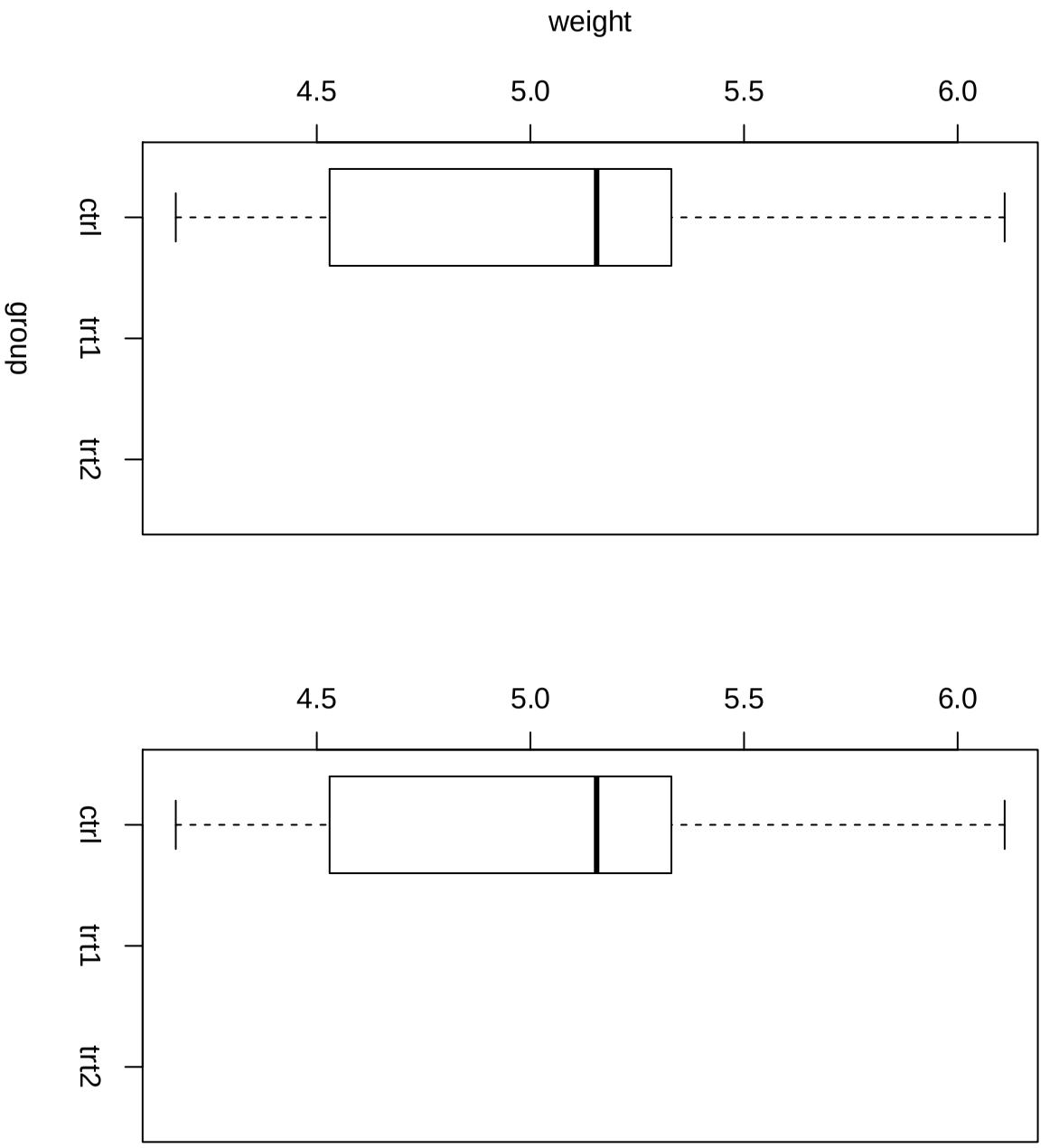
help("bxp")

bxp(*, frame= FALSE, outl= FALSE)

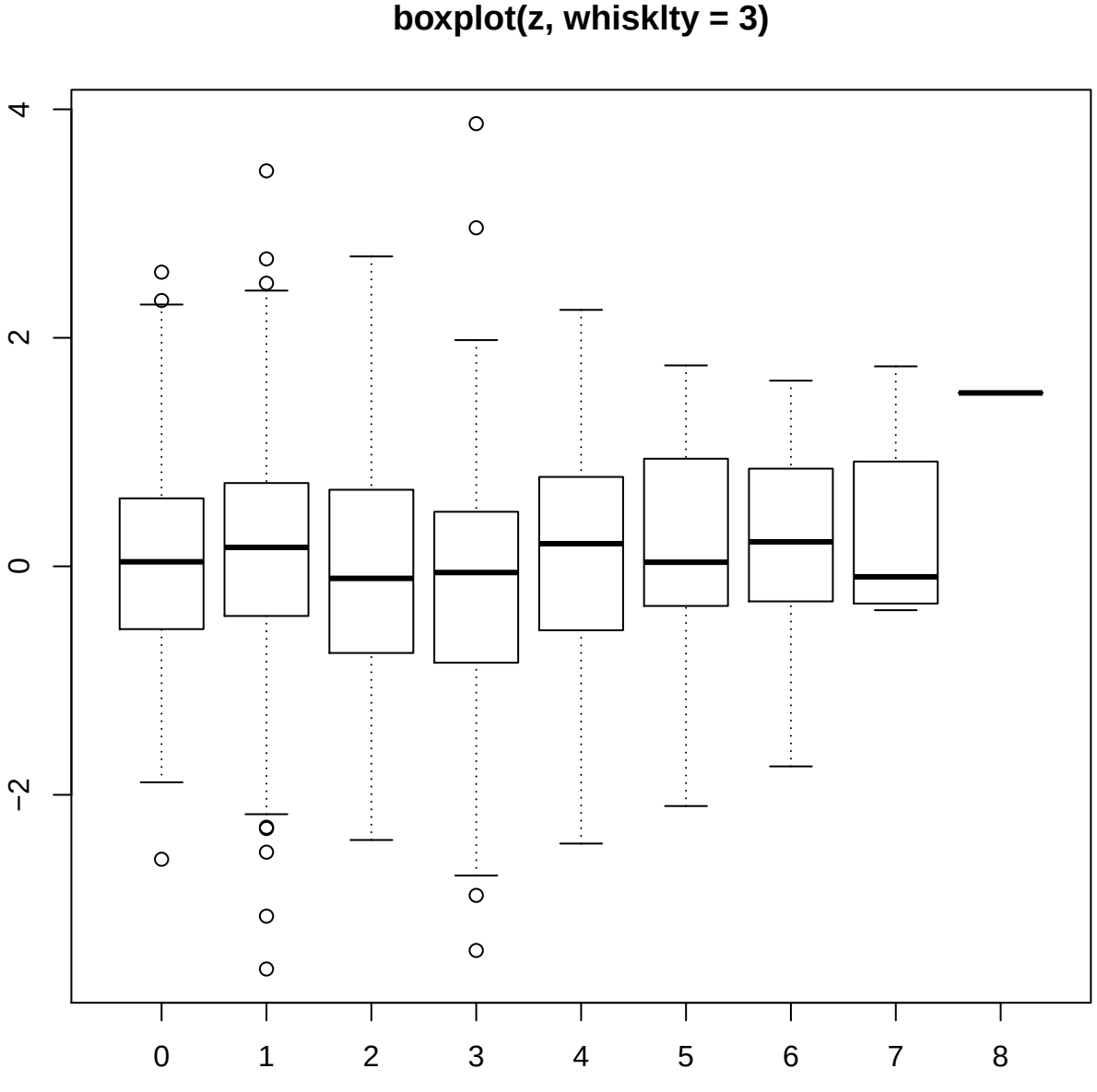


... log = 'x', ylim = **




weight
4.5
5.0
5.5
6.0
group
ctrl
trt1
trt2
4.5
5.0
5.5
6.0
ctrl
trt1
trt2

help("bxp")

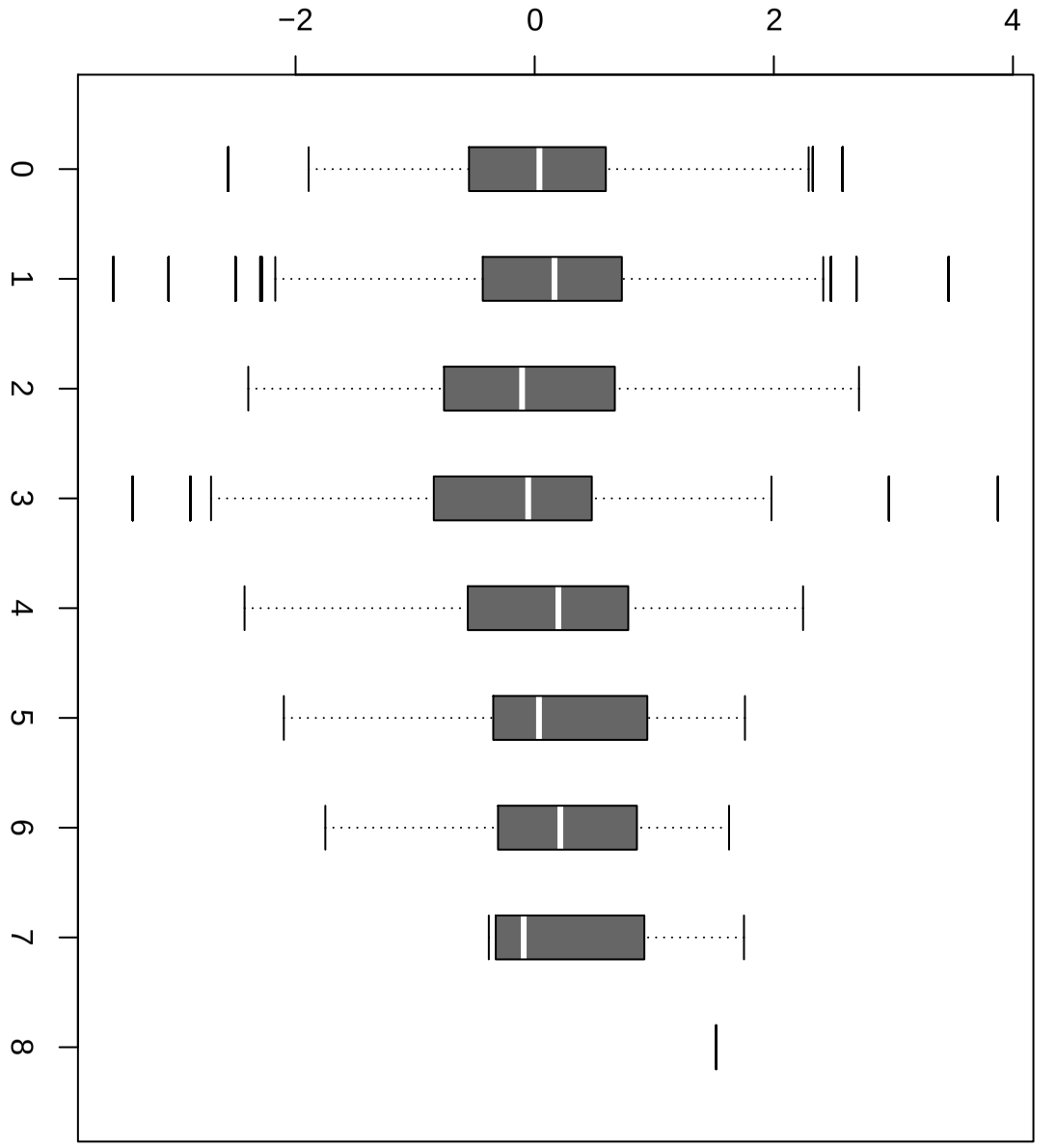

boxplot(z, whisklty = 3)
4
2
0
−2
0
1
2
3
4
5
6
7
8
help("bxp")

par(bg="light gray", fg="midnight blue")

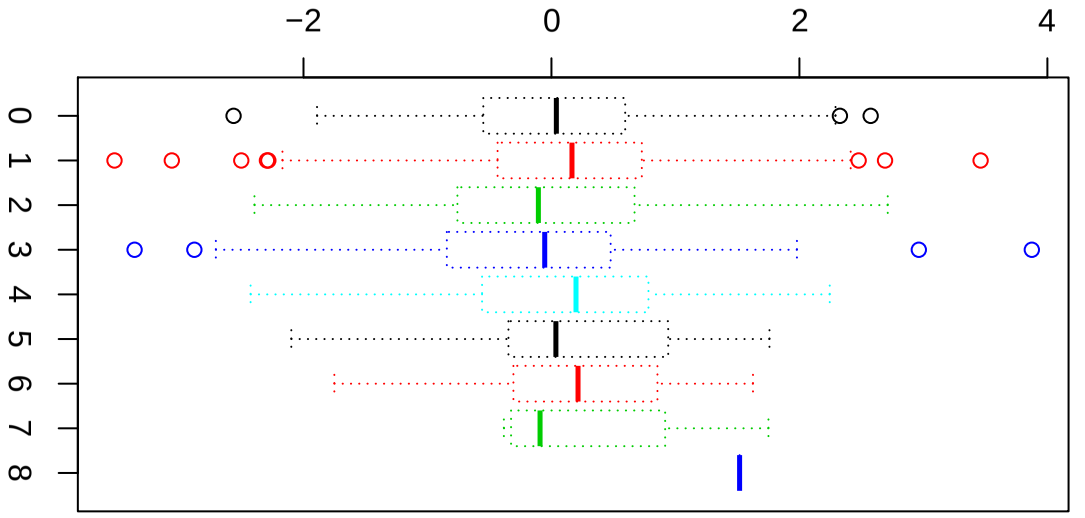
boxplot(*, col.axis=..,main=..)

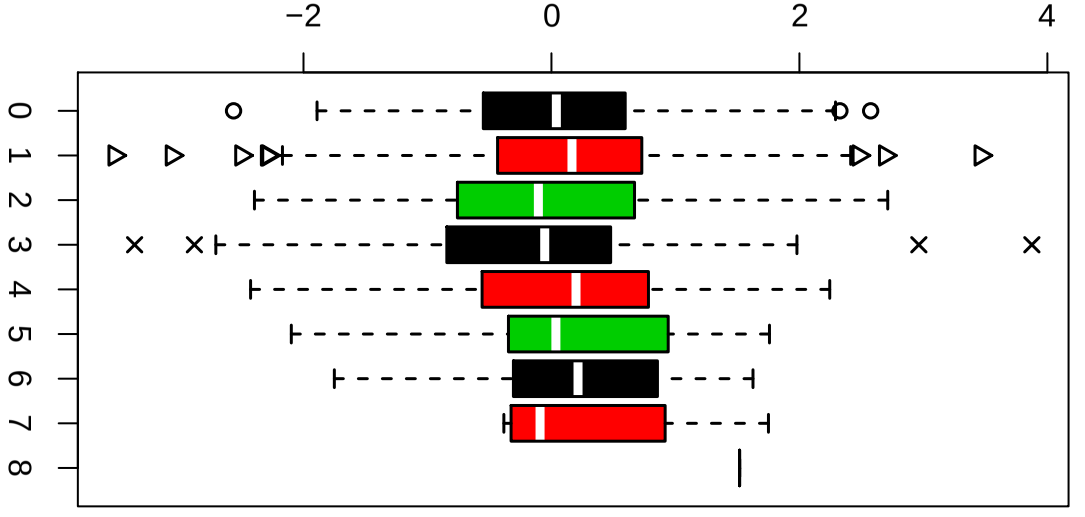
plot(*, col.axis=..,main=..)

help("bxp")

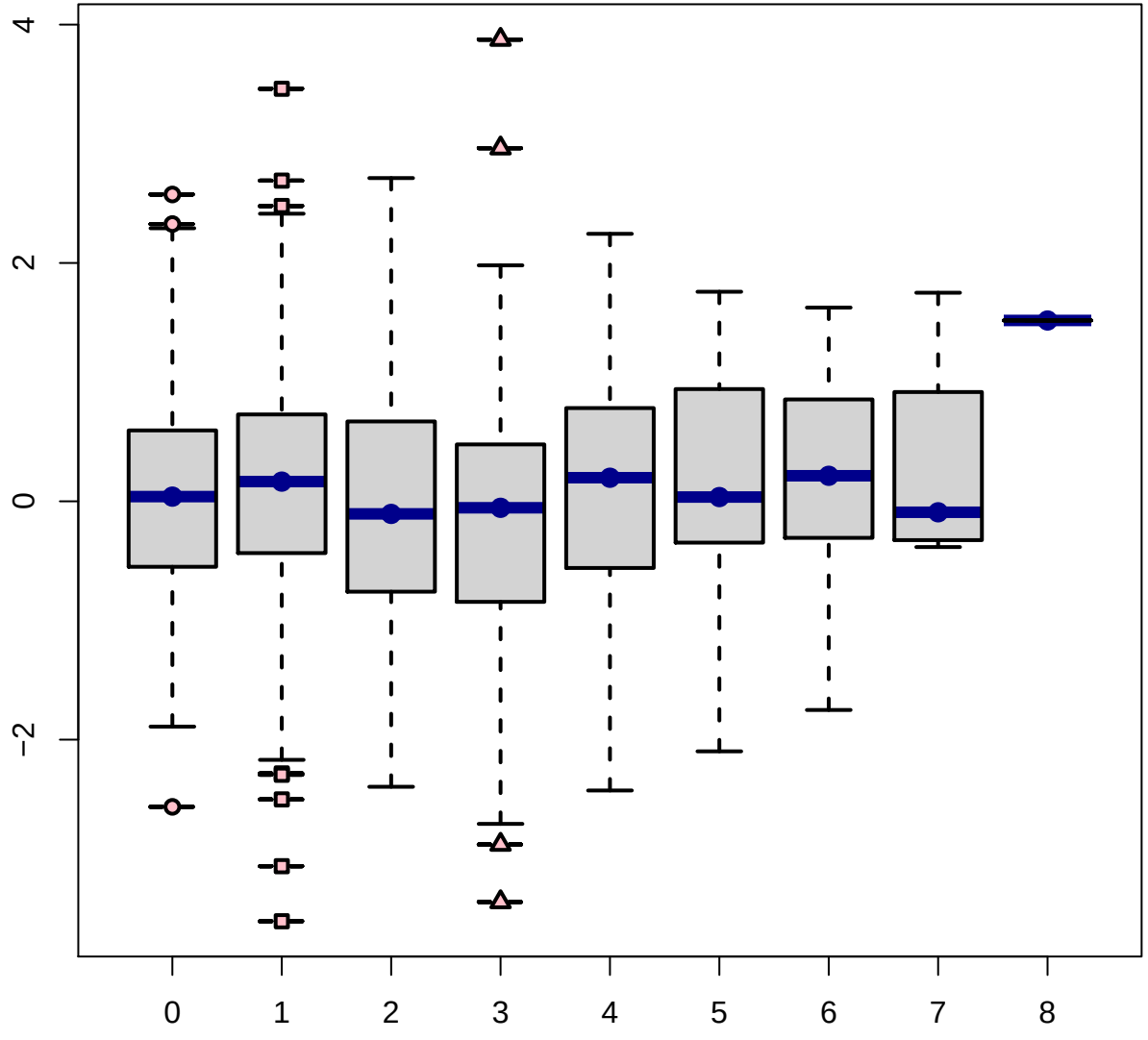


help("bxp")

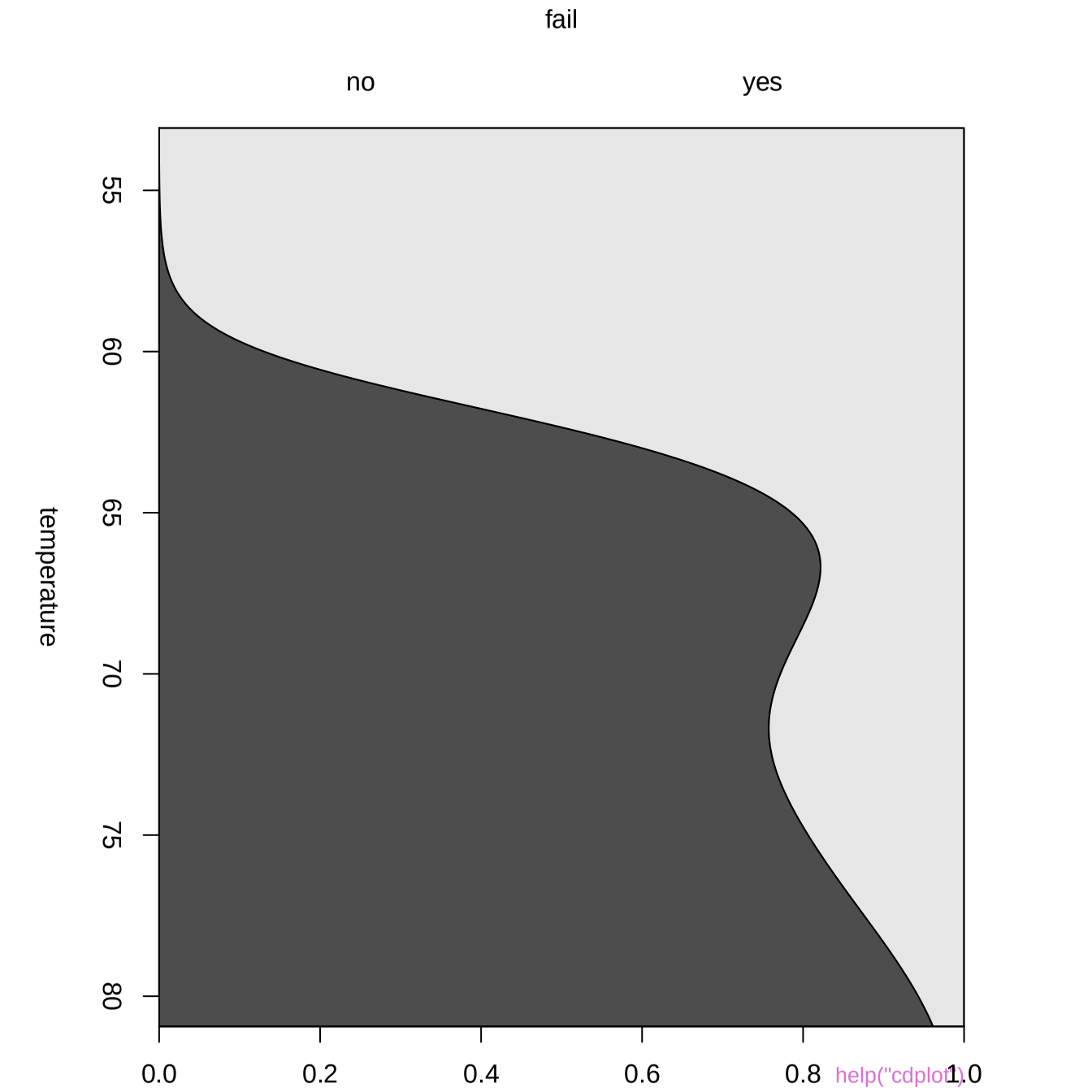


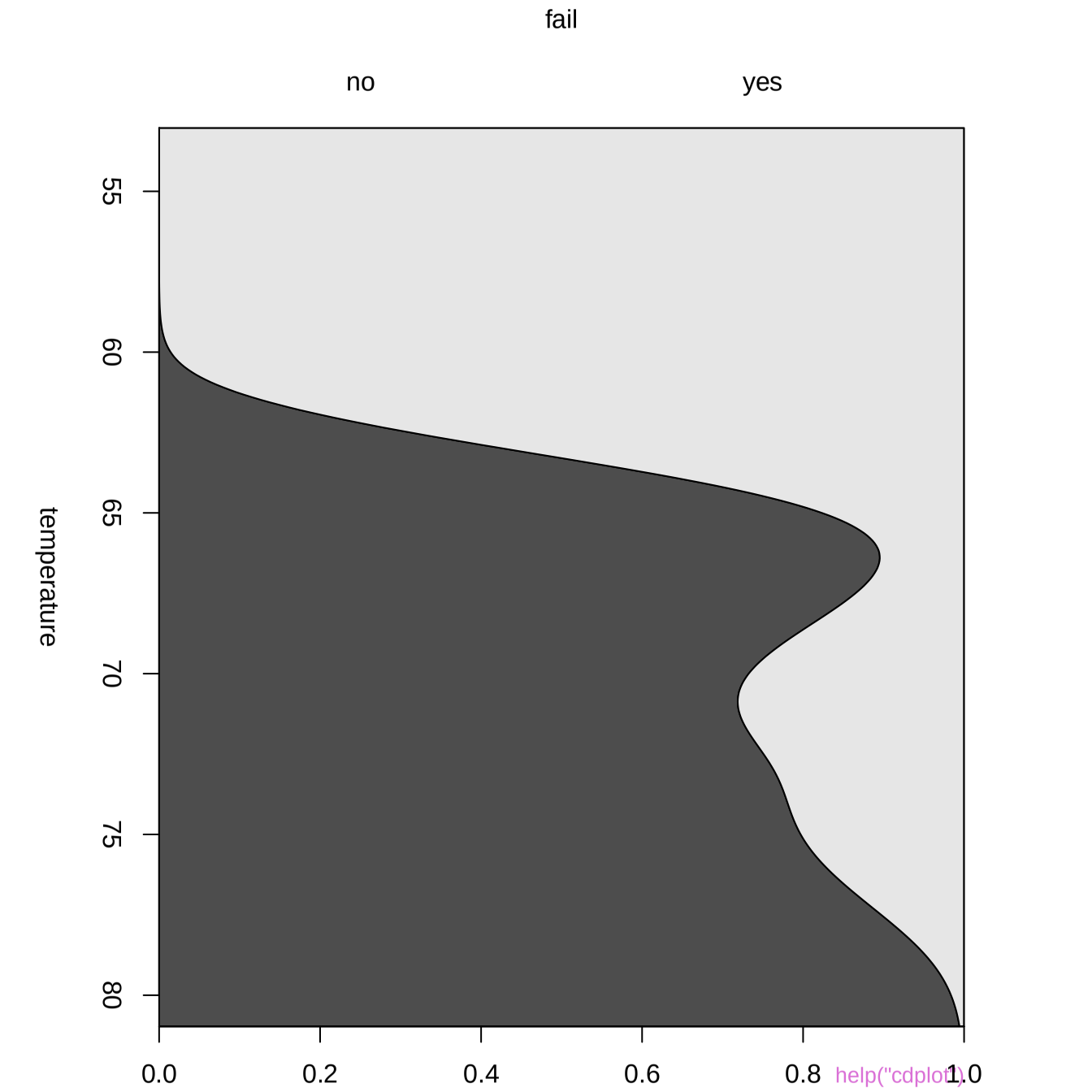


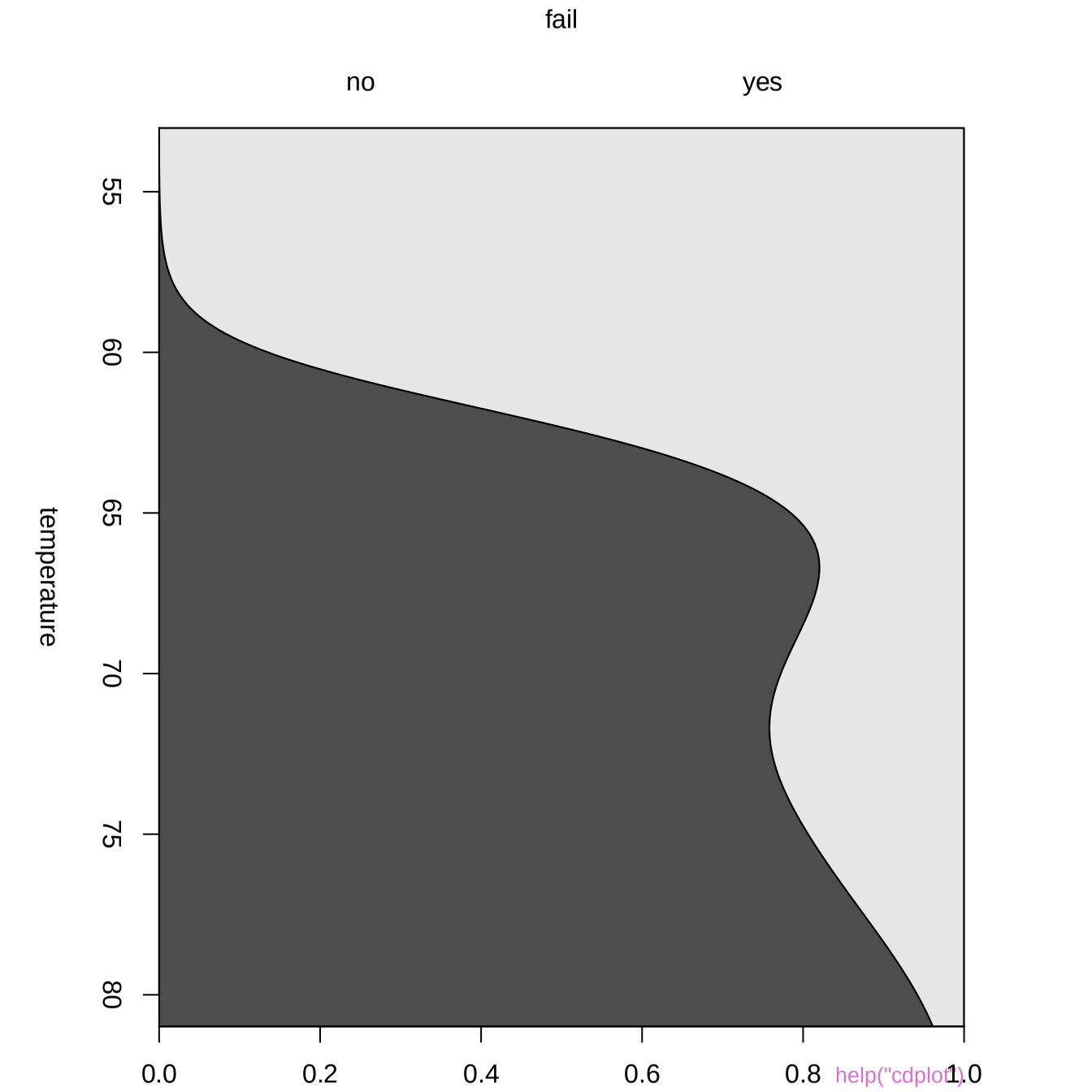
help("bxp")

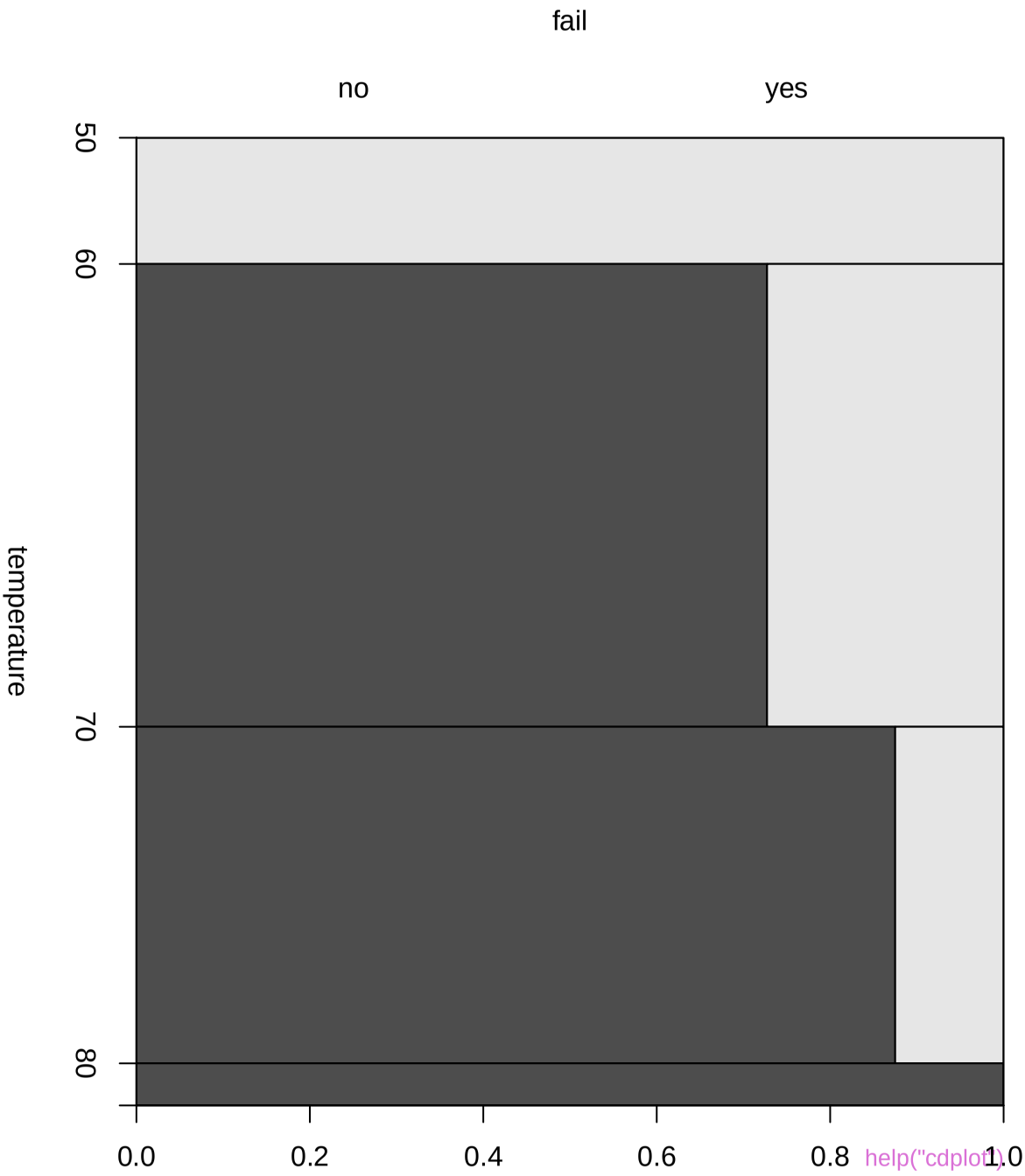


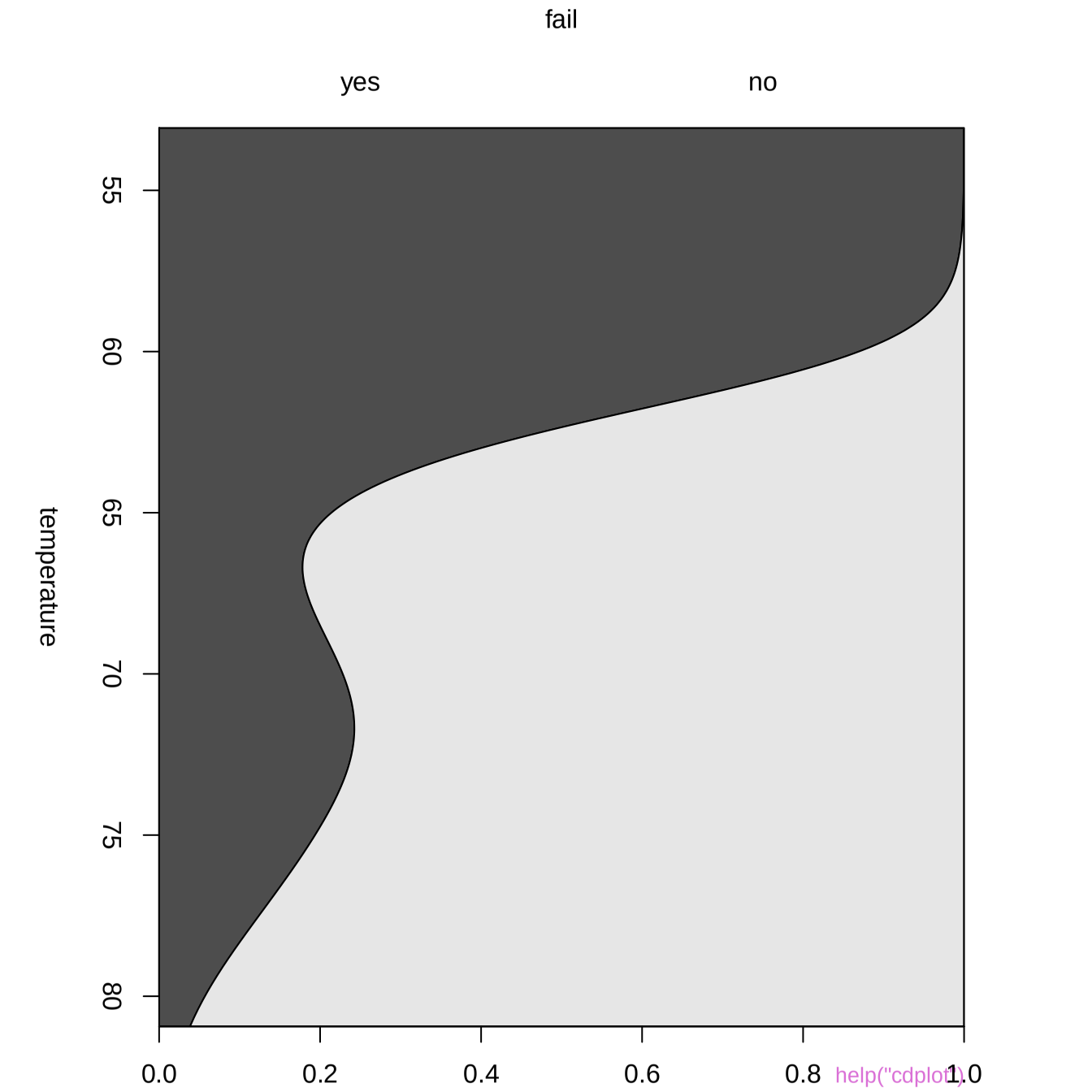
help("bxp")

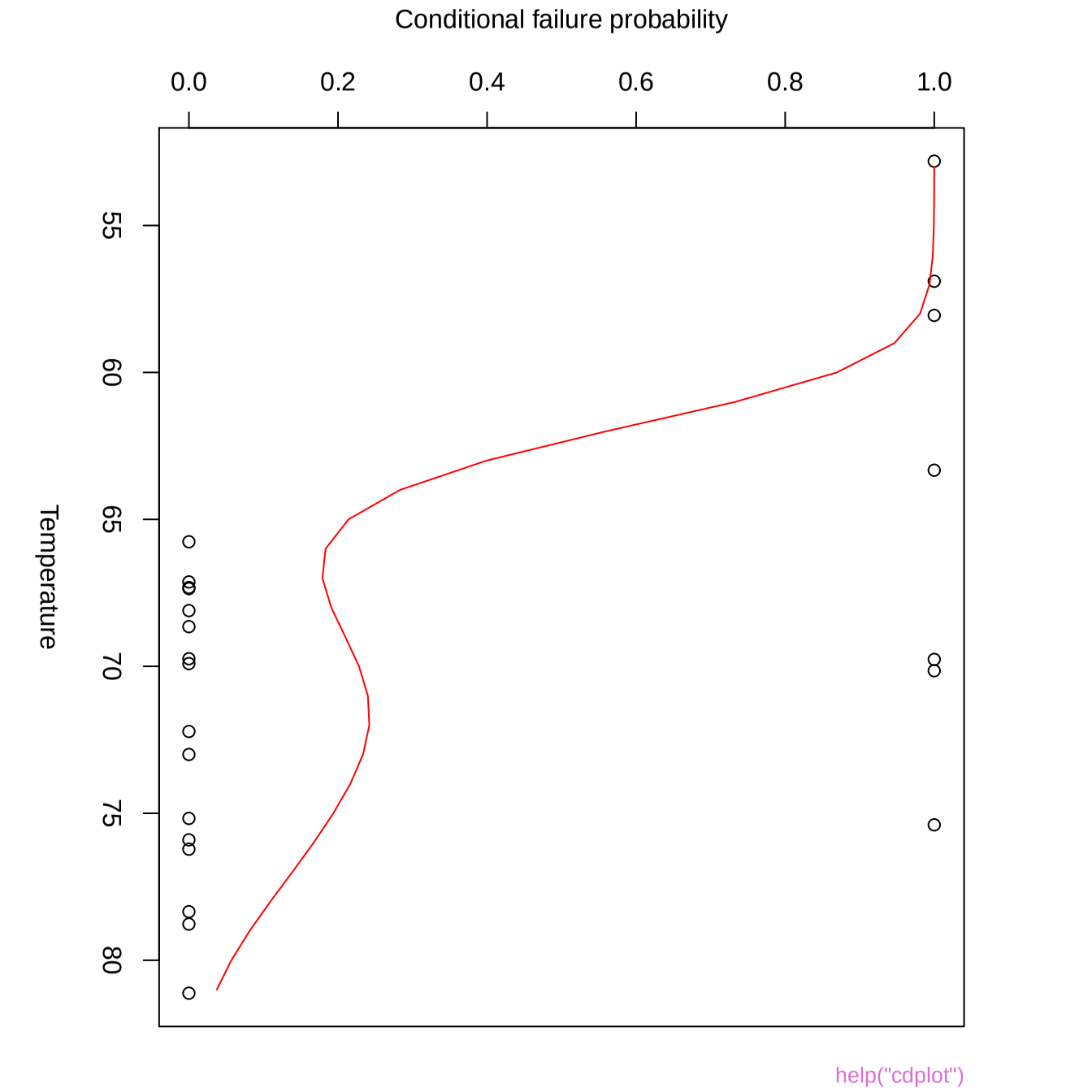

fail
no
yes
temperature
55
60
65
70
75
80
0.0
0.2
0.4
0.6
0.8
1.0
help("cdplot")

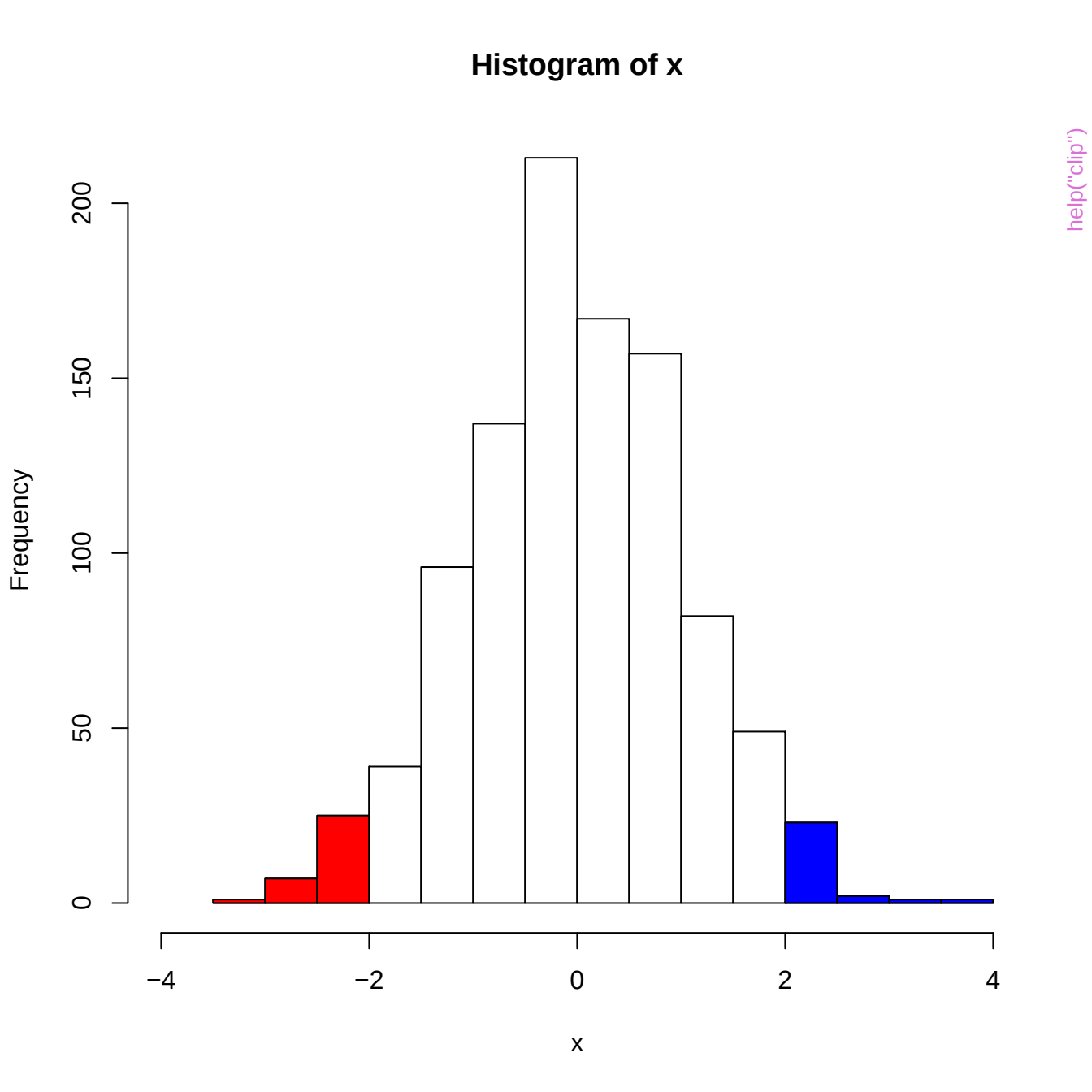

fail
no
yes
temperature
55
60
65
70
75
80
0.0
0.2
0.4
0.6
0.8
1.0
help("cdplot")

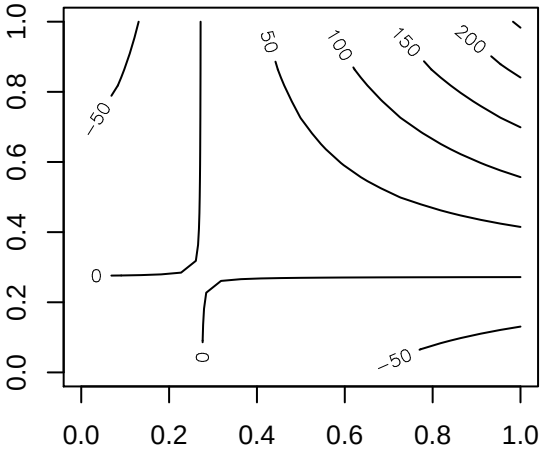

fail
no
yes
temperature
55
60
65
70
75
80
0.0
0.2
0.4
0.6
0.8
1.0
help("cdplot")

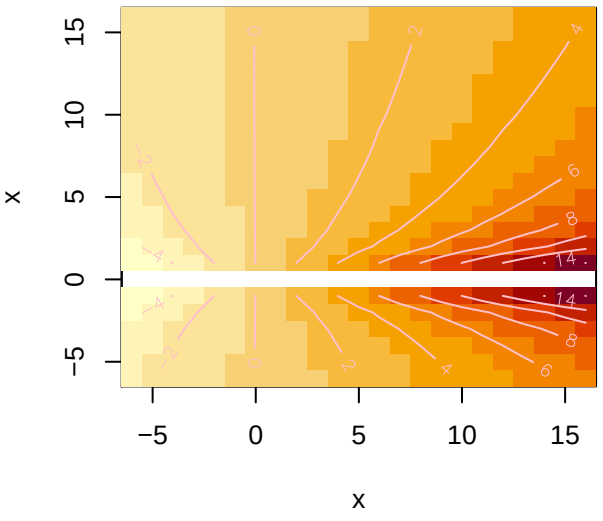

fail
no
yes
temperature
50
60
70
80
0.0
0.2
0.4
0.6
0.8
1.0
help("cdplot")


fail
yes
no
temperature
55
60
65
70
75
80
0.0
0.2
0.4
0.6
0.8
1.0
help("cdplot")

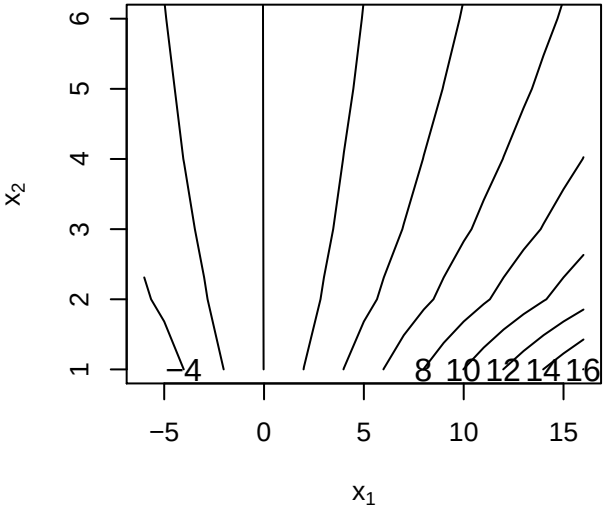

Conditional failure probability
0.0
0.2
0.4
0.6
0.8
1.0
Temperature
55
60
65
70
75
80
help("cdplot")

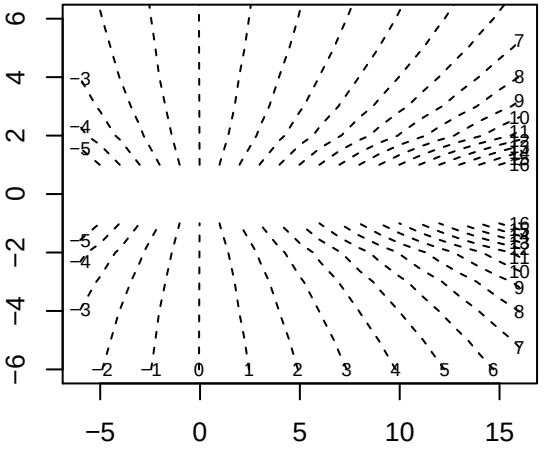

Histogram of x
Frequency
0
50
100
150
200
−4
−2
0
2
4
x
help("clip")

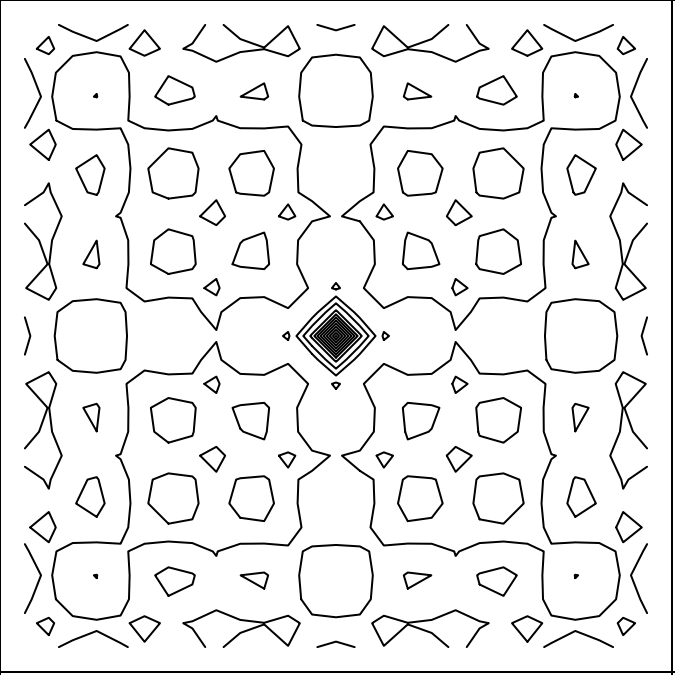


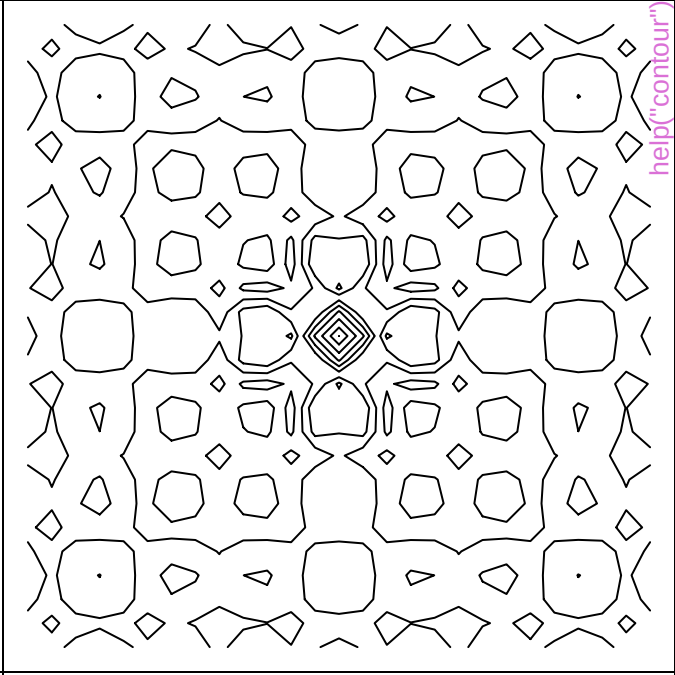


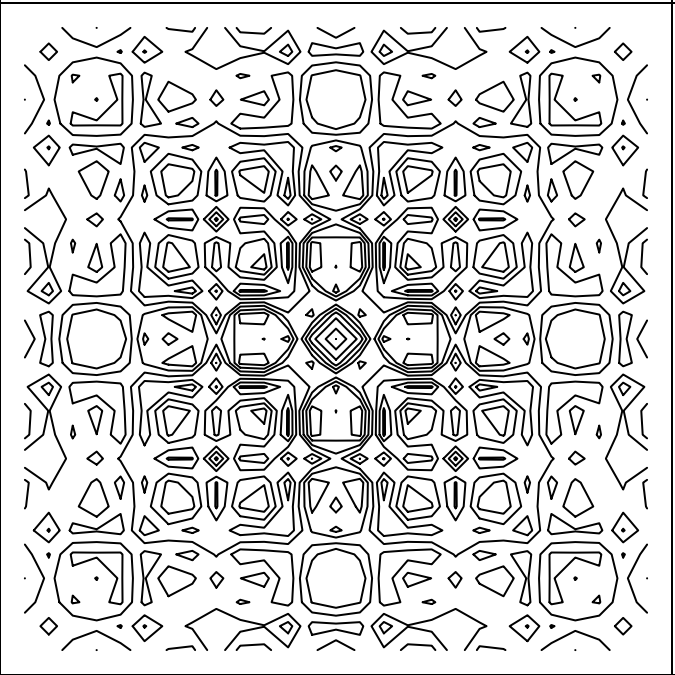
20 levels; "simple" labelling method

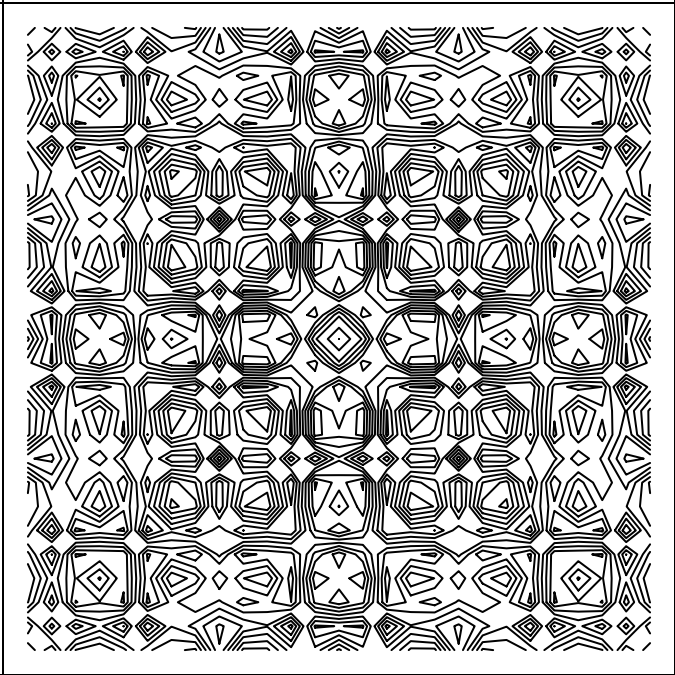




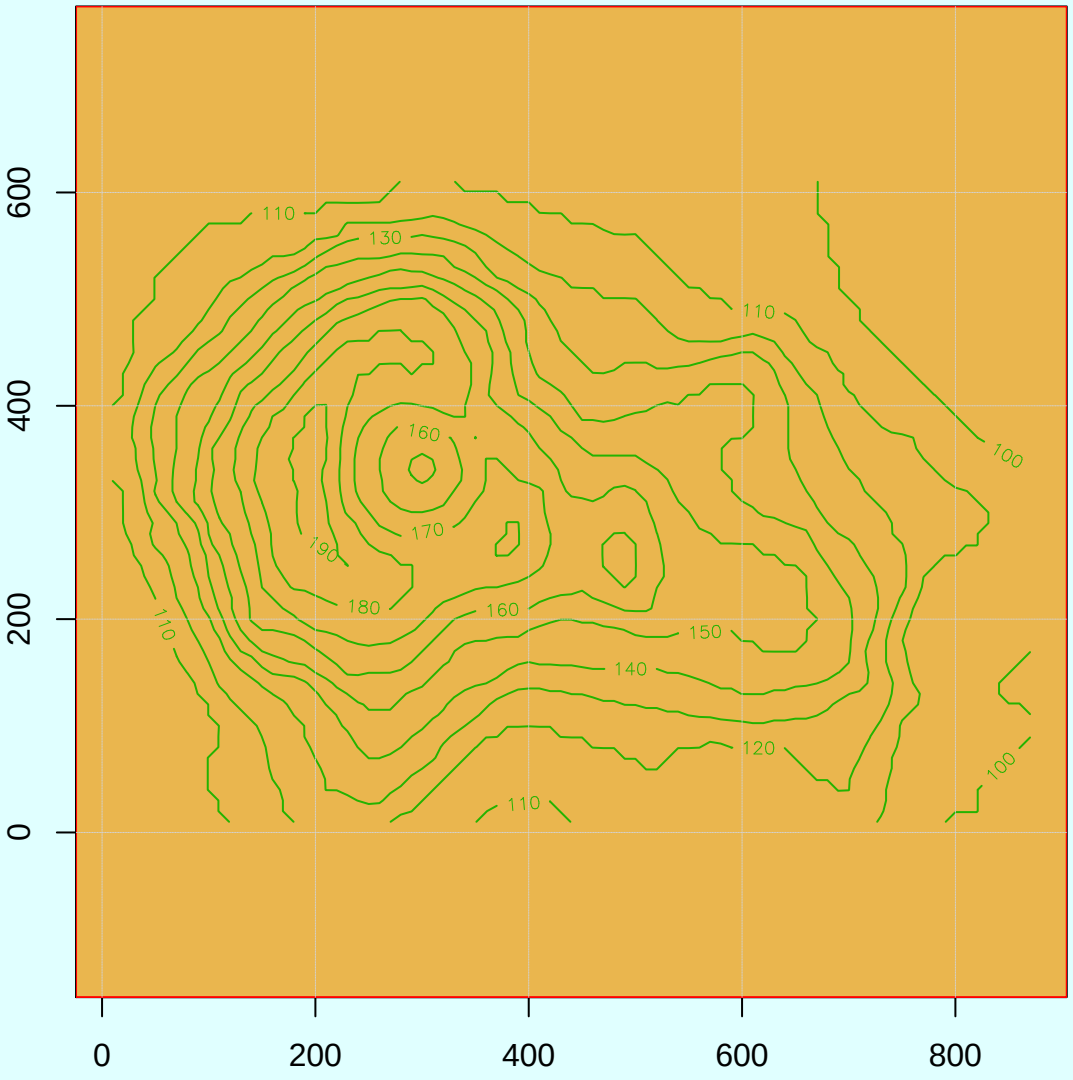


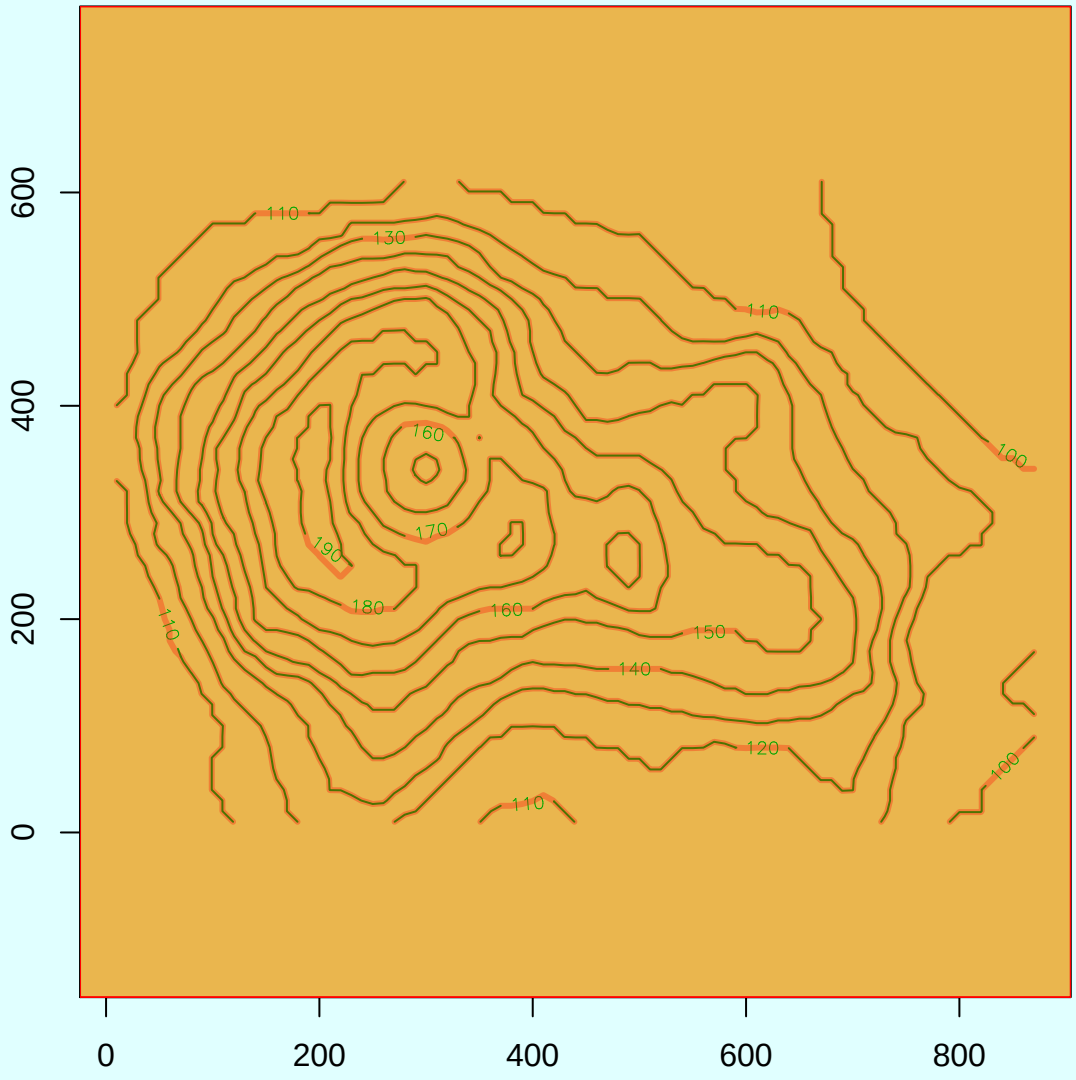

help("contour")



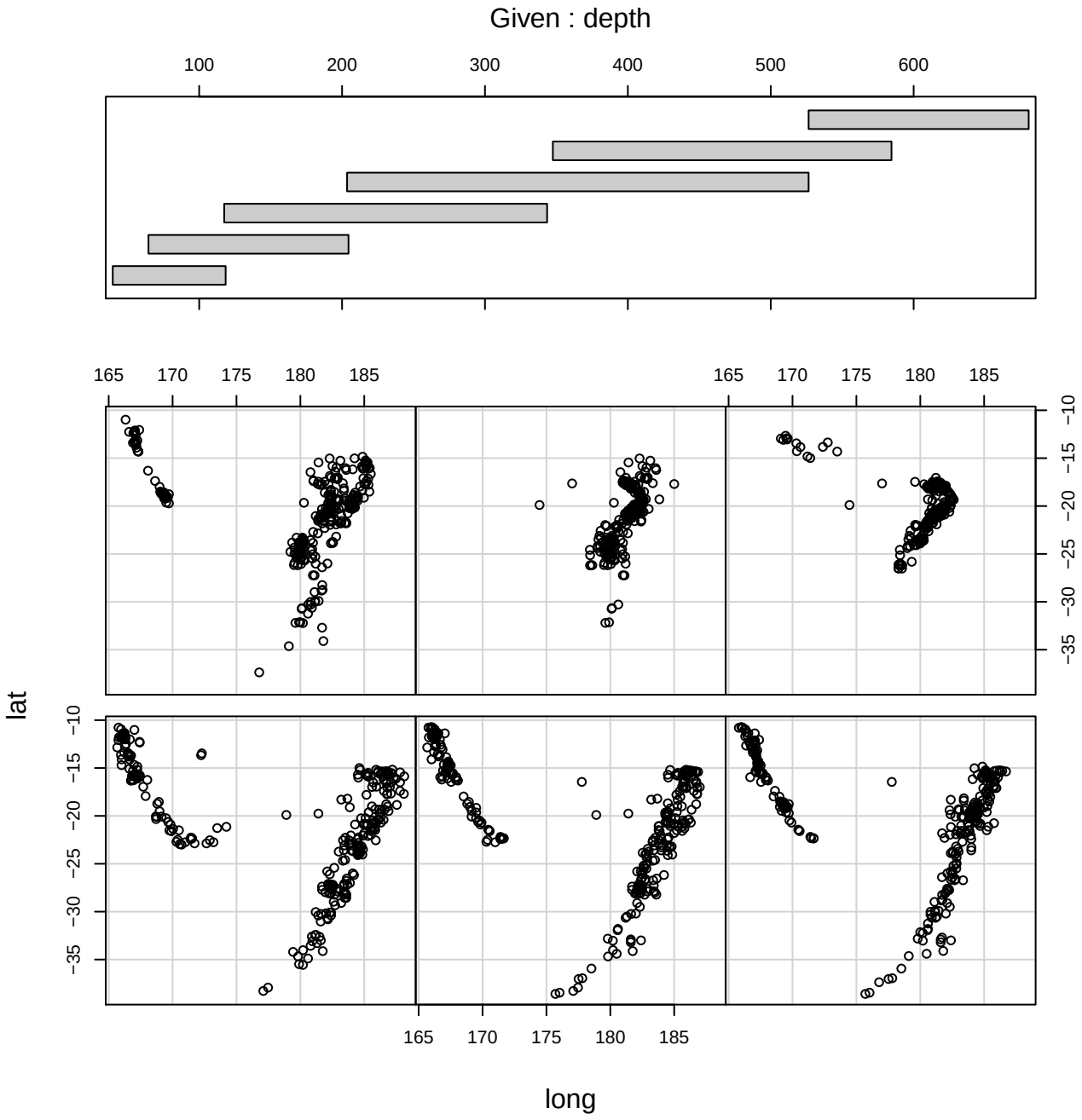


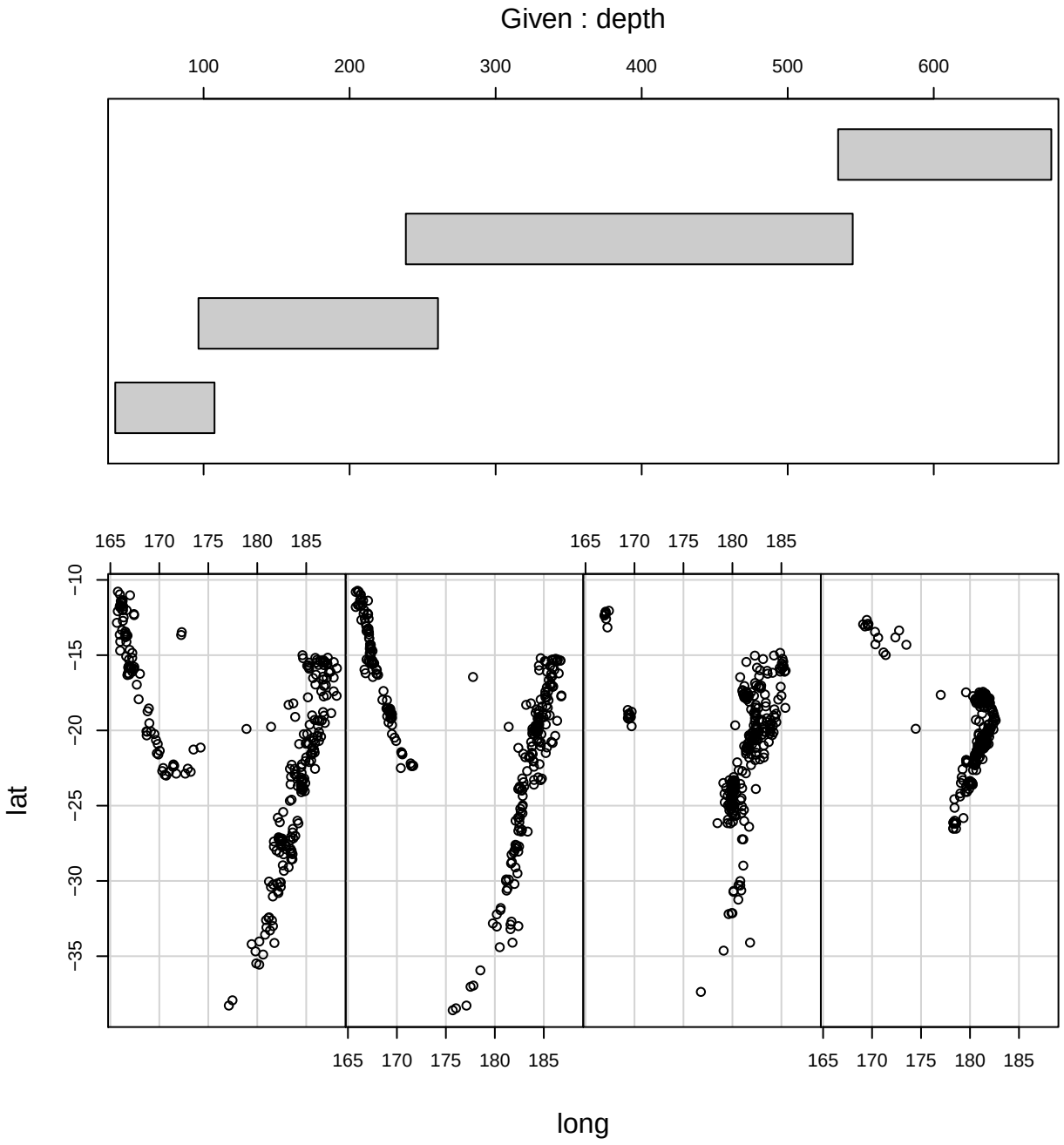
A Topographic Map of Maunga Whau




help("contour")
0
200
400
600
800
0
200
400
600
110
130
110
160
100
190
170
180
160
150
140
120
110
100

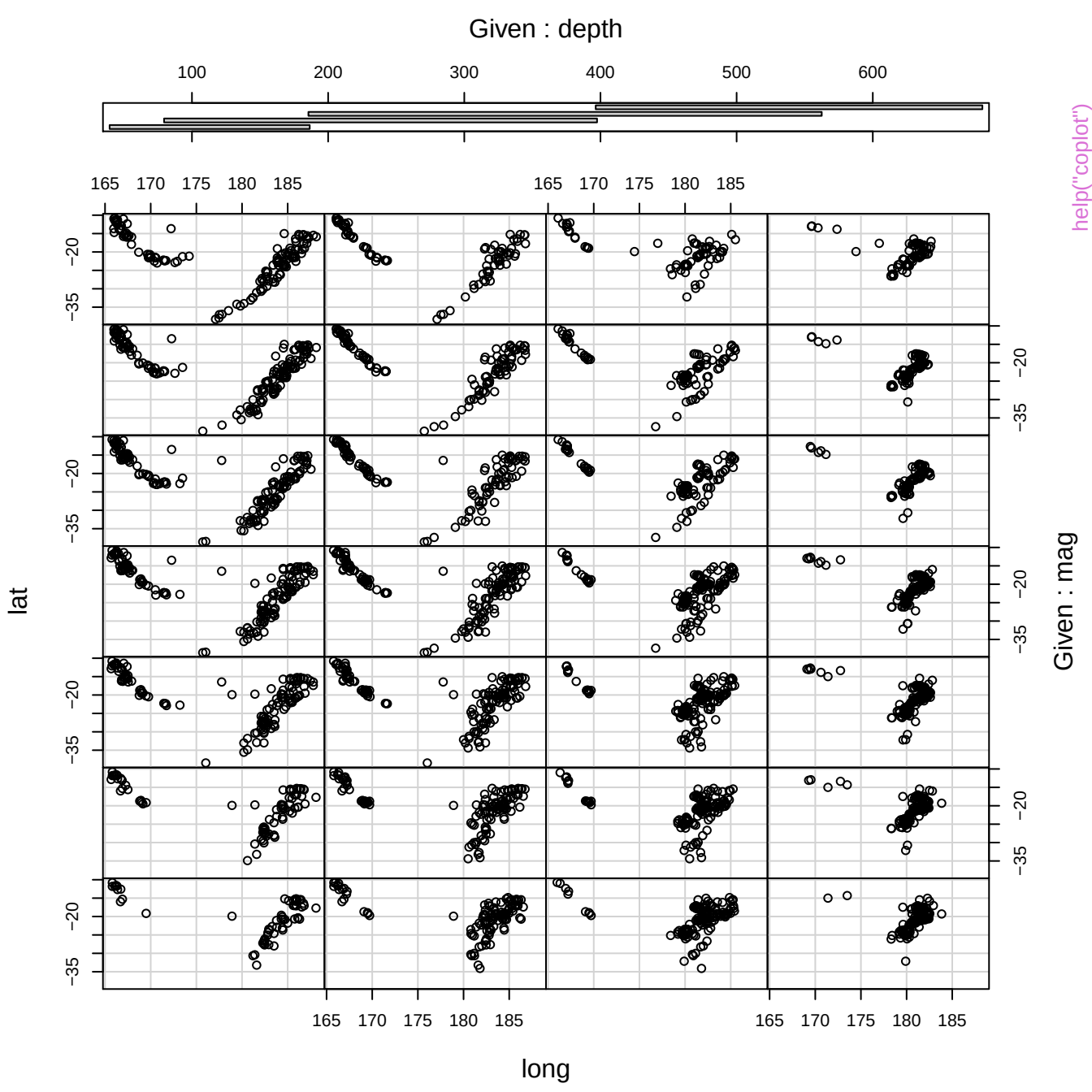
1:4
1.0
1.5
2.0
2.5
3.0
3.5
4.0
1.0
2.0
3.0
4.0
Index


Given : depth
100
200
300
400
500
600
help("coplot")
165
170
175
180
185
−10
−15
−20
−25
−30
−35
lat
long


Given : depth
100
200
300
400
500
600
165
170
175
180
185
−10
−15
−20
−25
−30
−35
lat
long

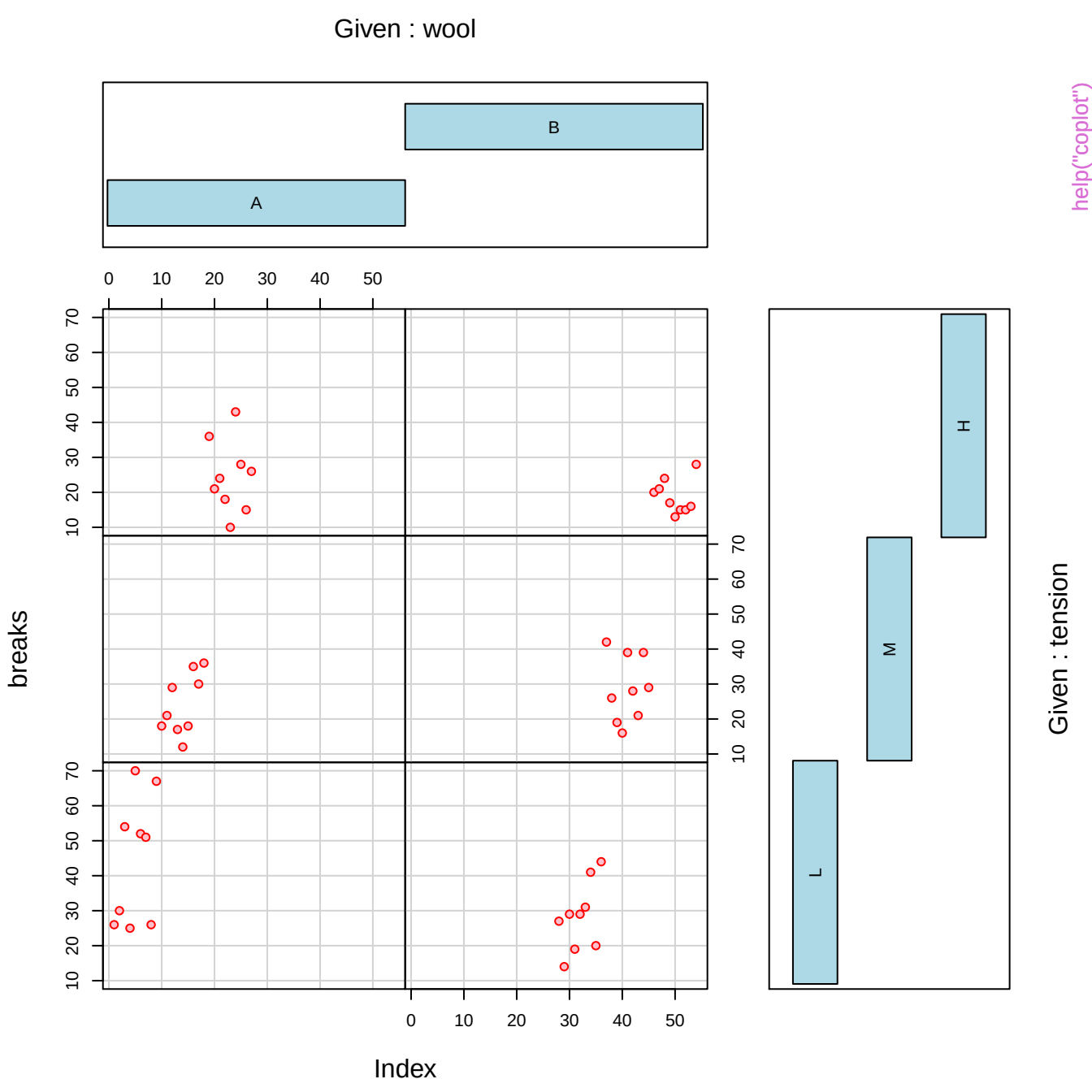
help("coplot")

Given : depth
100
200
300
400
500
600
lat
long
Given : mag
4.0
4.5
5.0
5.5
6.0
165
175
185
−20
−35
help("coplot")

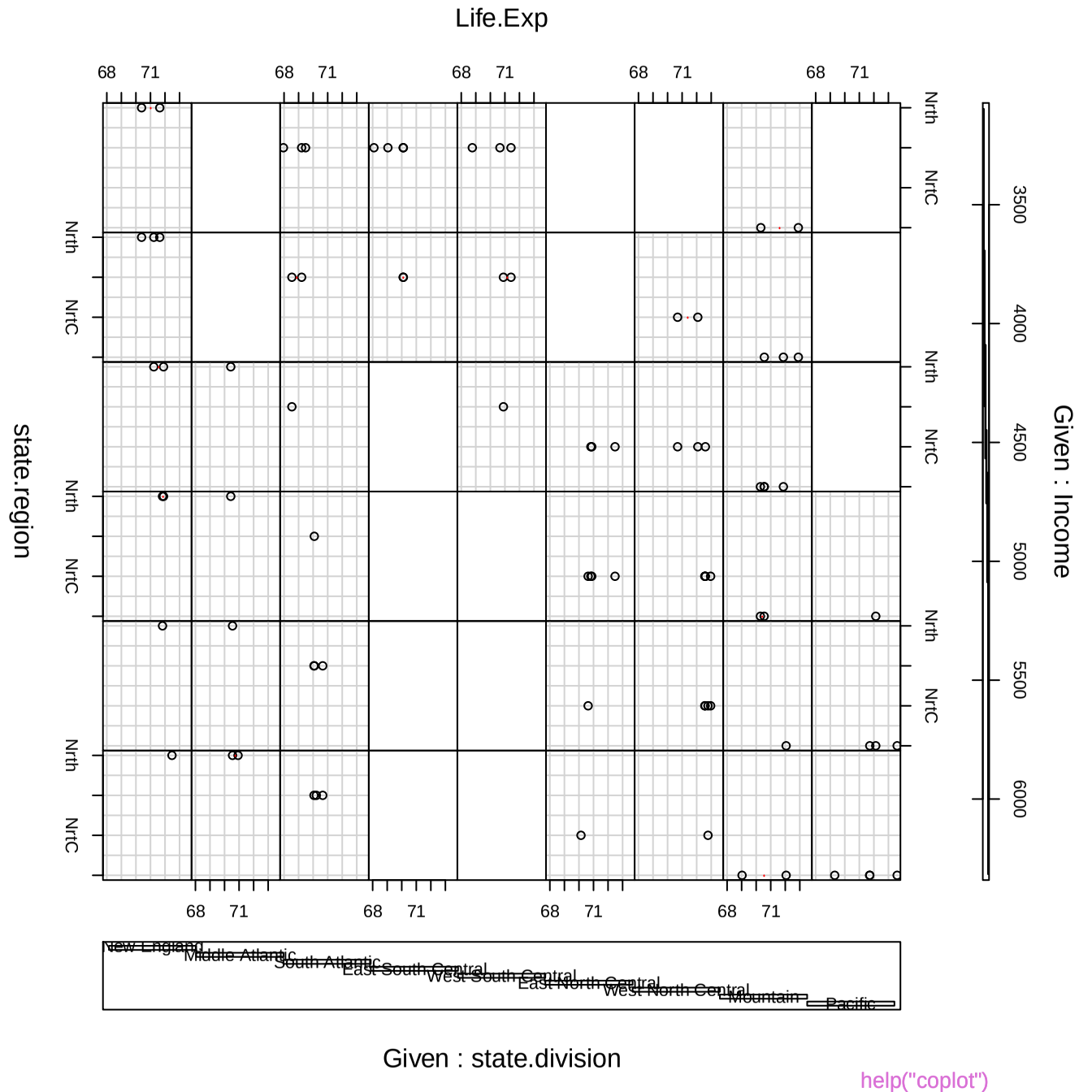

Given : depth
100
200
300
400
500
600
help("coplot")
lat
long
Given : mag
165
170
175
180
185
−20
−35

Given : depth
100
200
300
400
500
600
165
170
175
180
185
−20
−35
lat
long
Given : mag
4.0
4.5
5.0
5.5
6.0
help("coplot")

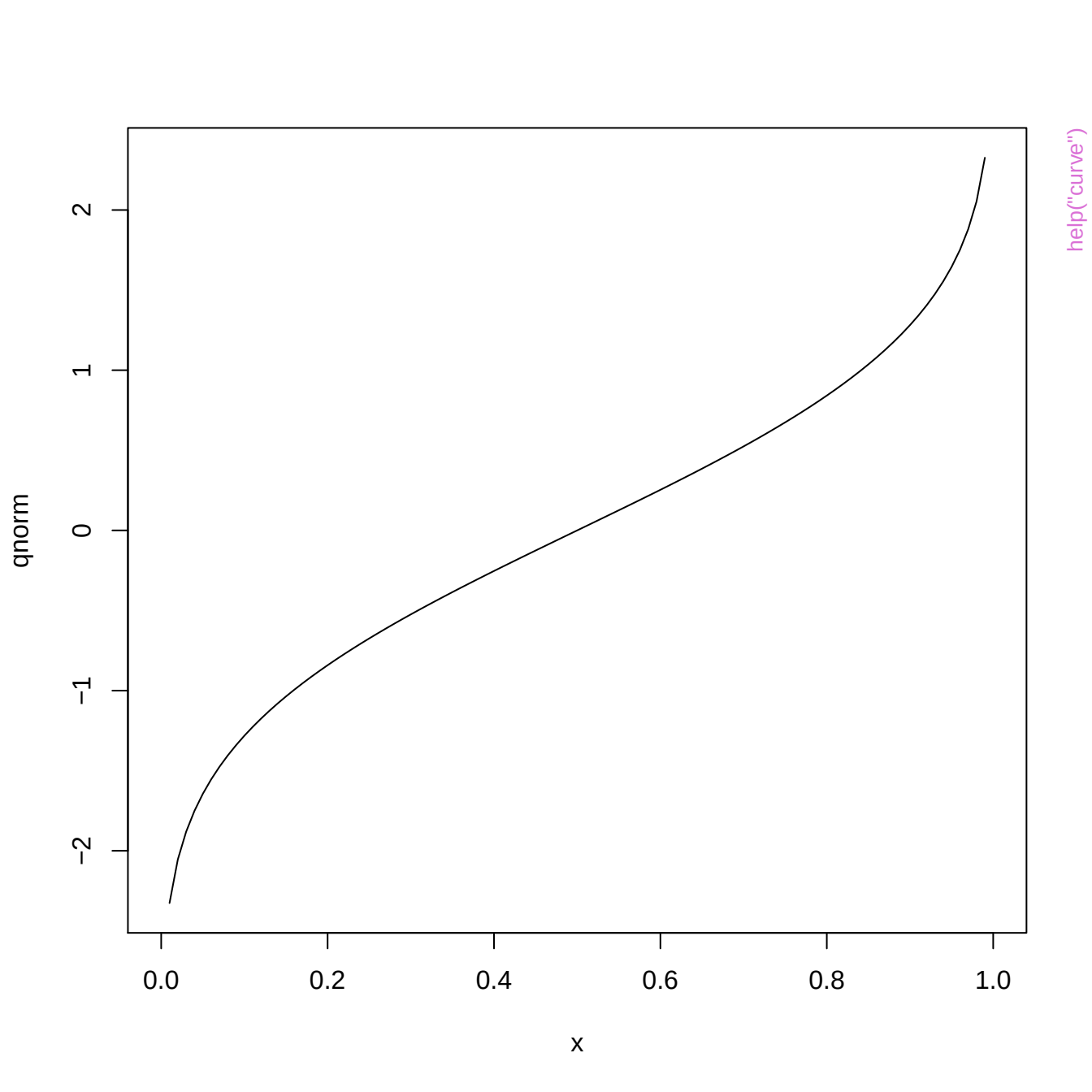
Given : wool
0
10
20
30
40
50
10
20
30
40
50
60
70
breaks
Index
Given : tension
L
M
H
help("coplot")

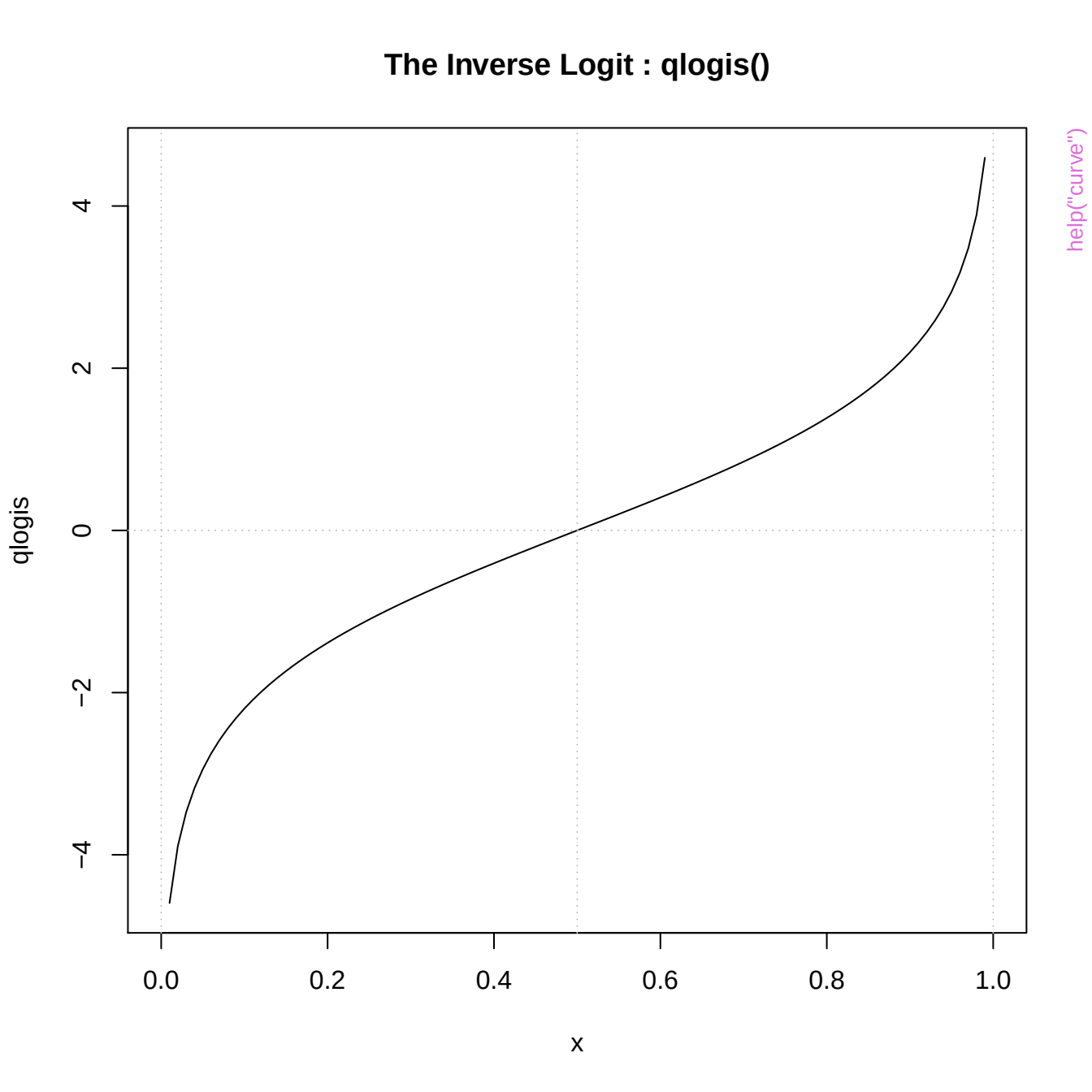

Given : wool
A
B
0
10
20
30
40
50
10
20
30
40
50
60
70
breaks
Index
Given : tension
L
M
H
help("coplot")

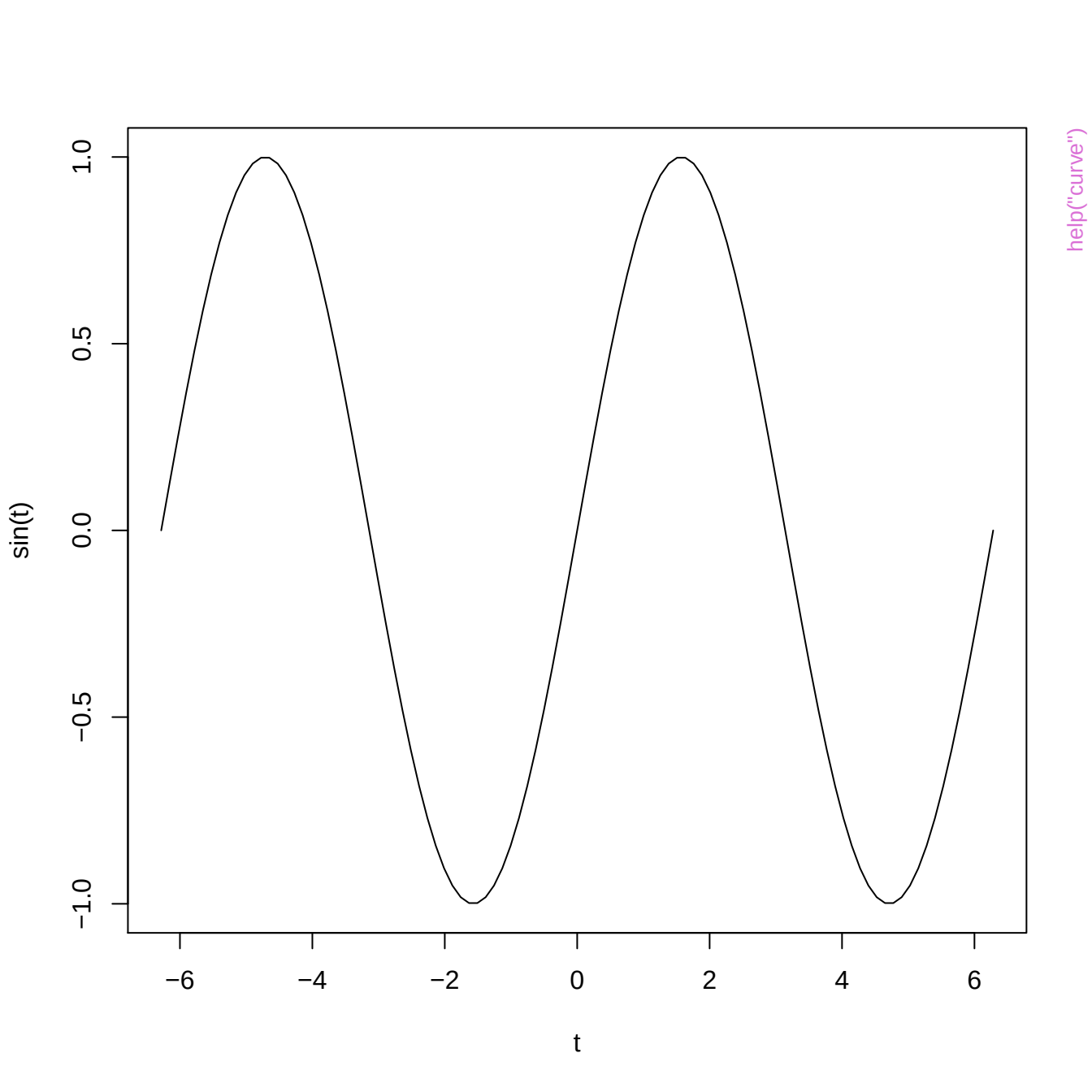
Given : Illiteracy
0.5
1.0
1.5
2.0
2.5
3000
4000
5000
6000
Life.Exp
68
70
72
Income
Given : state.region
Northeast
South
North Central
West
help("coplot")

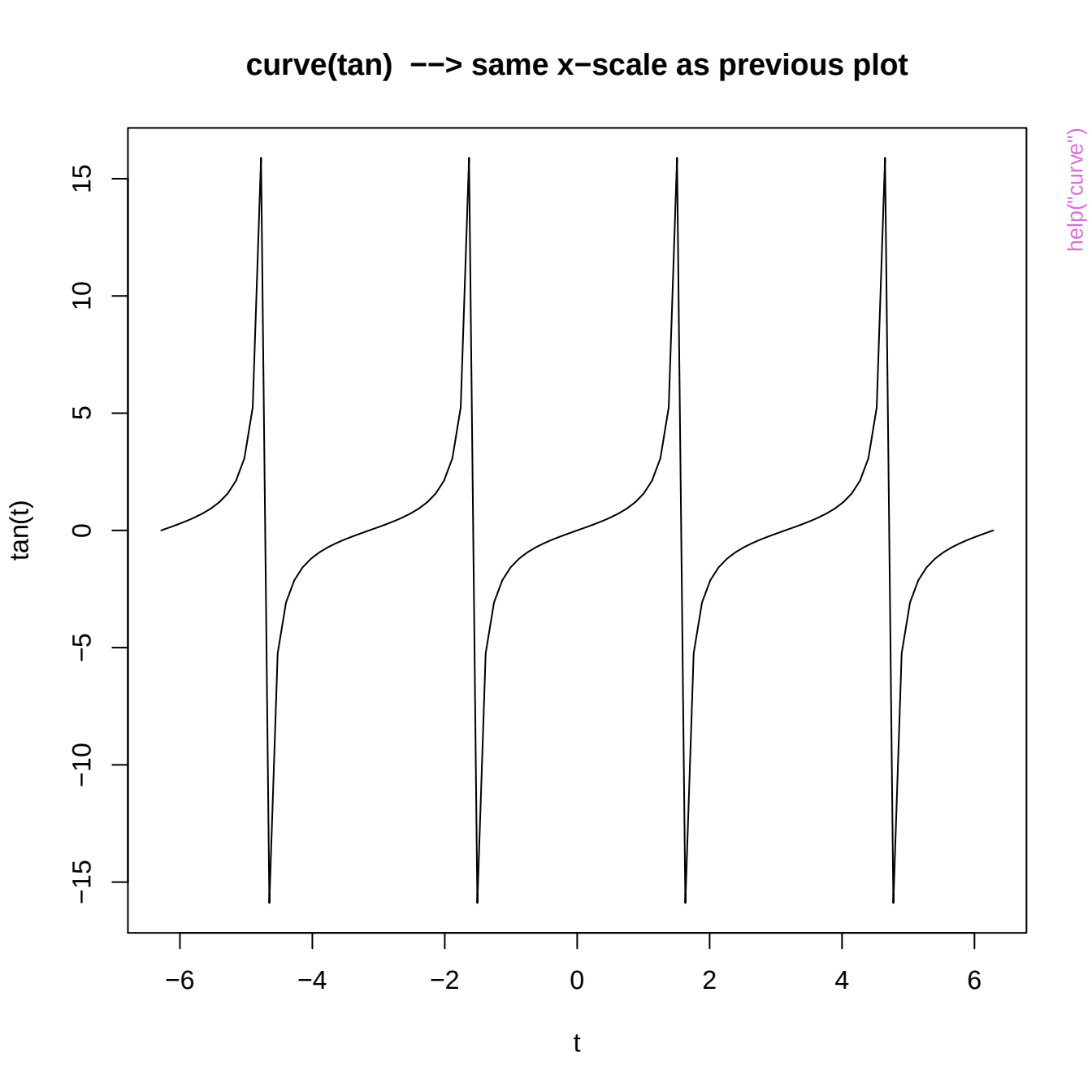

Life.Exp
68
71
Nrth
NrtC
Given : Income
3500
4000
4500
5000
5500
6000
state.region
Given : state.division
New England
Middle Atlantic
South Atlantic
East South Central
West South Central
East North Central
West North Central
Mountain
Pacific

help("coplot")


qnorm
2
1
0
−1
−2
0.0
0.2
0.4
0.6
0.8
1.0
x
help("curve")


The Inverse Logit : qlogis()
qlogis
4
2
0
−2
−4
0.0
0.2
0.4
0.6
0.8
1.0
x
help("curve")


sin(t)
1.0
0.5
0.0
−0.5
−1.0
−6
−4
−2
0
2
4
6
t
help("curve")

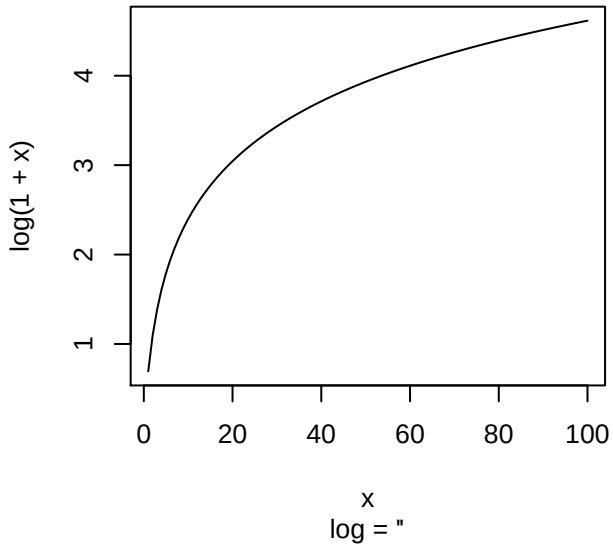

curve(tan) −−> same x−scale as previous plot
tan(t)
15
10
5
0
−5
−10
−15
−6
−4
−2
0
2
4
6
t
help("curve")

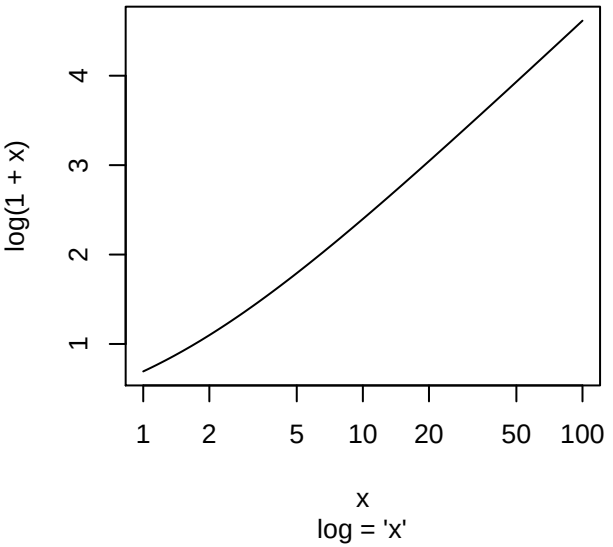
x^3 − 3 * x
2
1
0
−1
−2
−2
−1
0
1
2
x

cos
1.0
0.5
0.0
−0.5
−1.0
−2
0
2
4
6
8
x
help("curve")

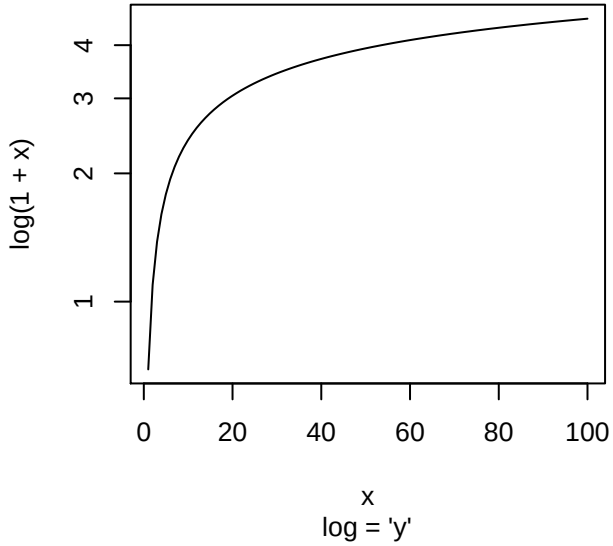
chippy(x)
1.0
0.5
0.0
−0.5
−1.0
−5
0
5
x

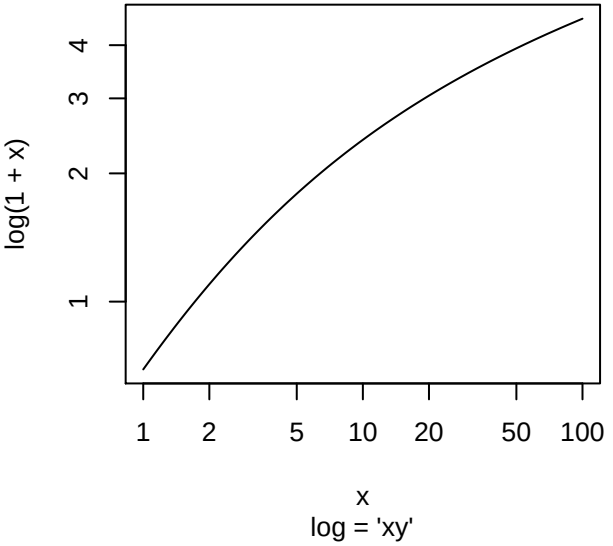
chippy
1.0
0.5
0.0
−0.5
−1.0
−8.0
−7.0
−6.0
−5.0
x

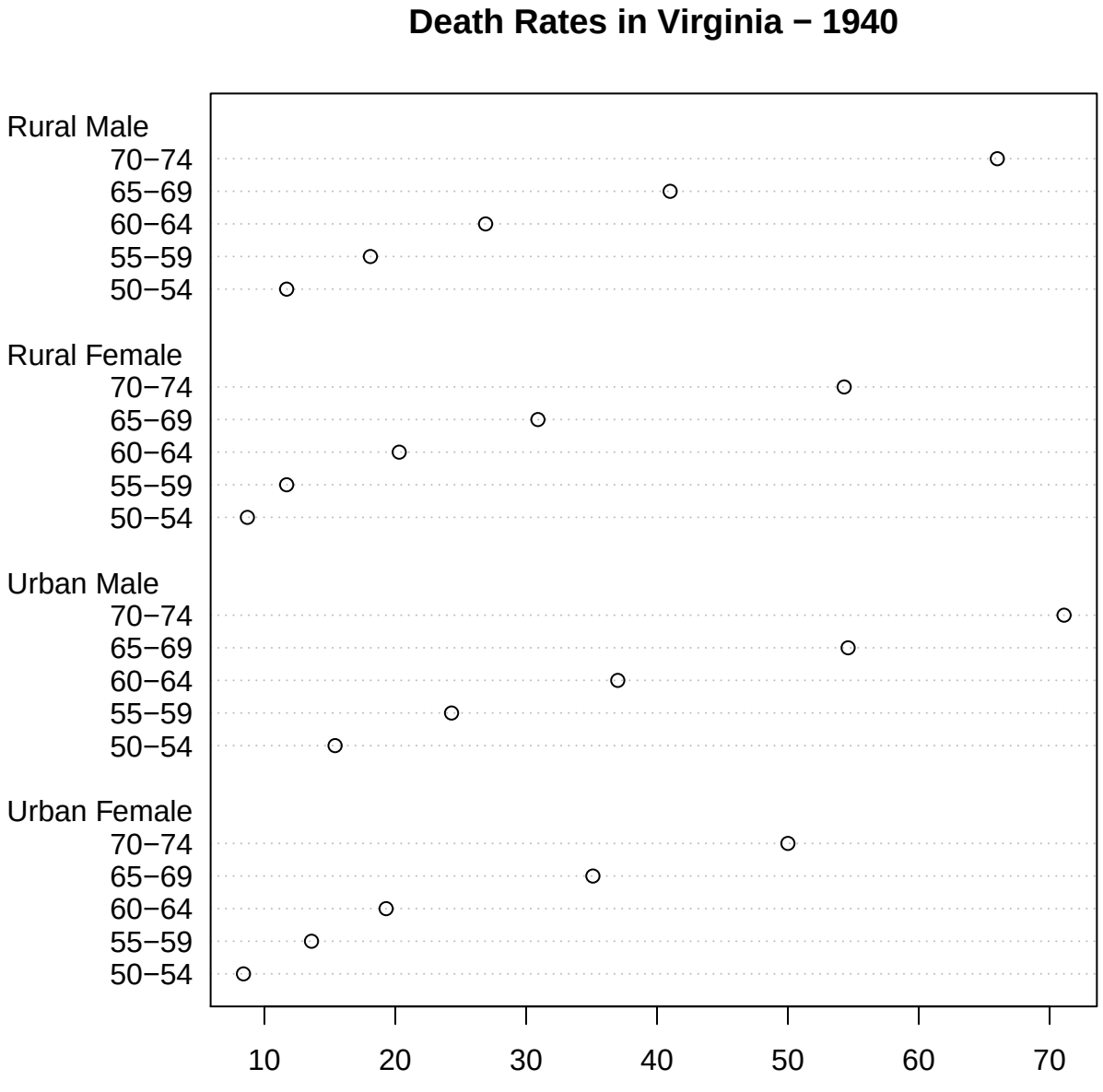

log(1 + x)
1
2
3
4
0
20
40
60
80
100
x
log = ''

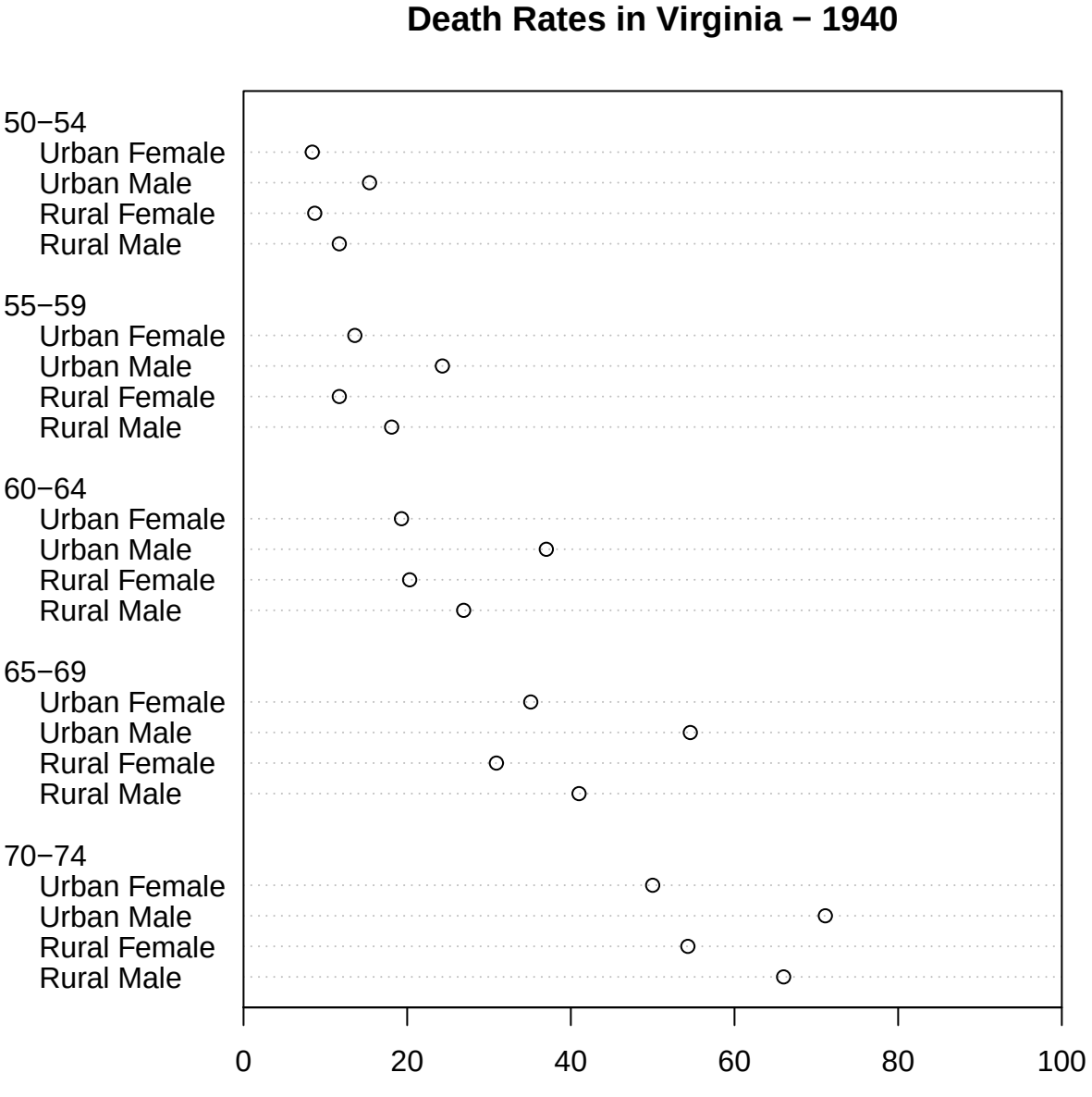

log(1 + x)
1
2
3
4
1
2
5
10
20
50
100
x
log = 'x'

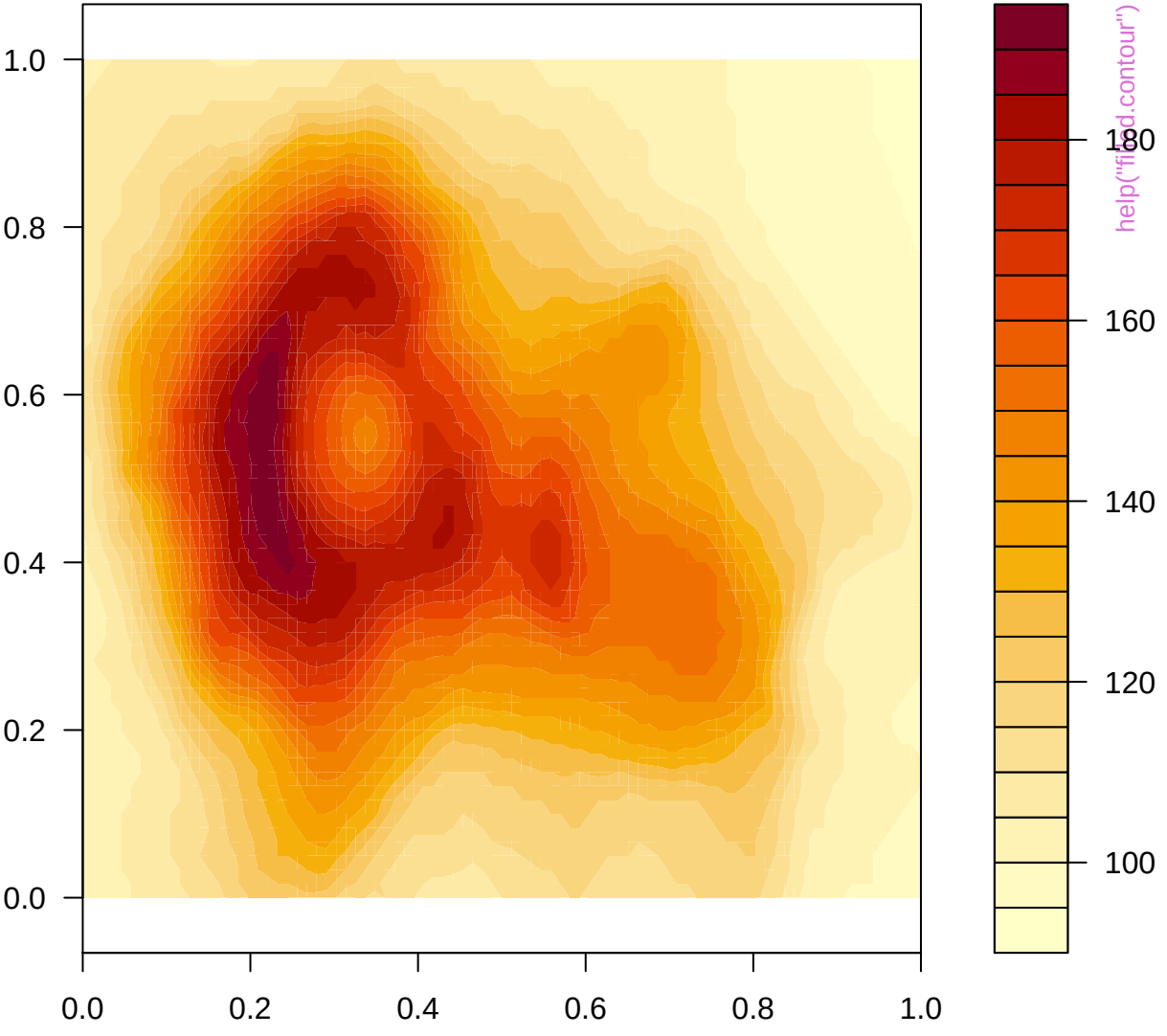
help("curve")

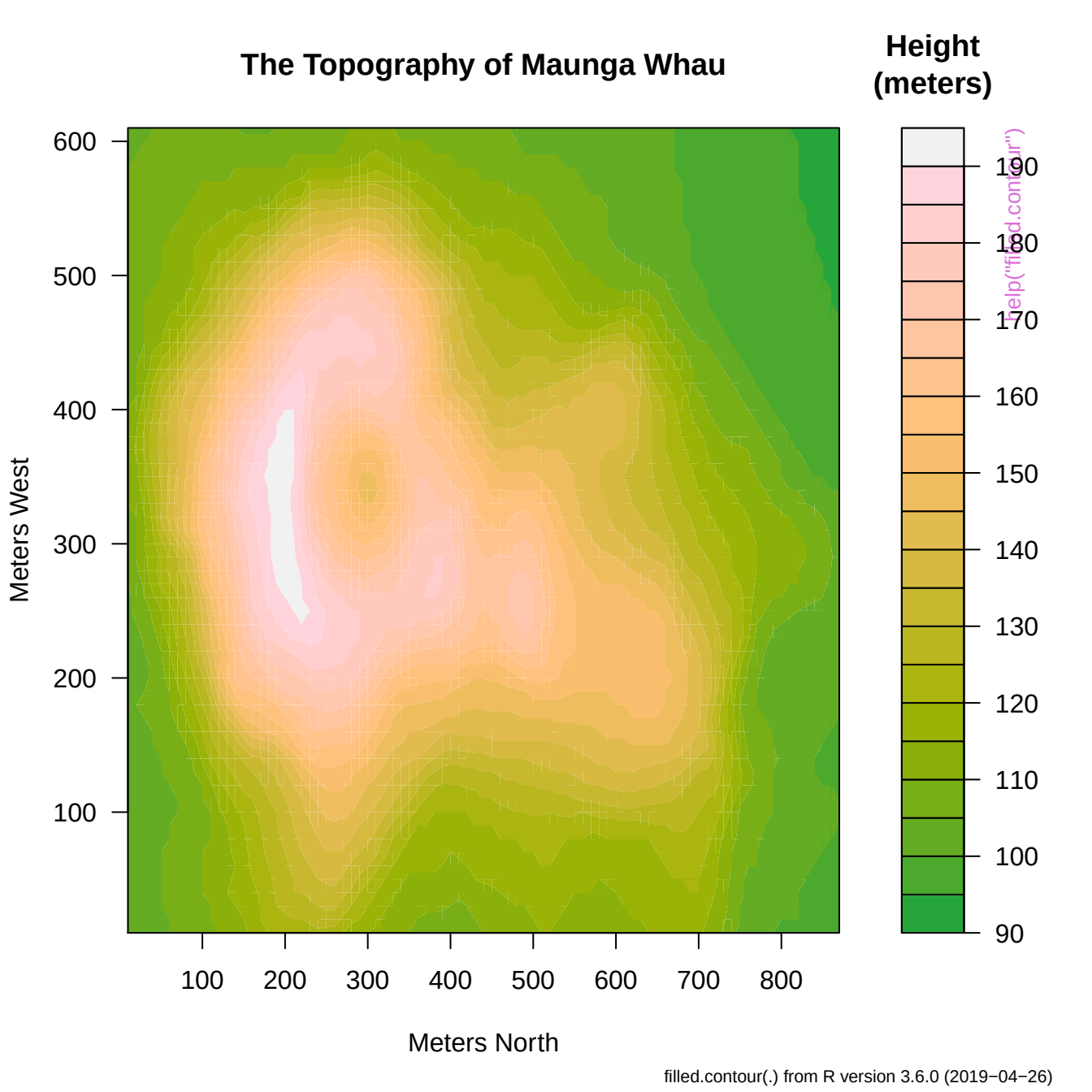

log(1 + x)
1
2
3
4
0
20
40
60
80
100
x
log = 'y'

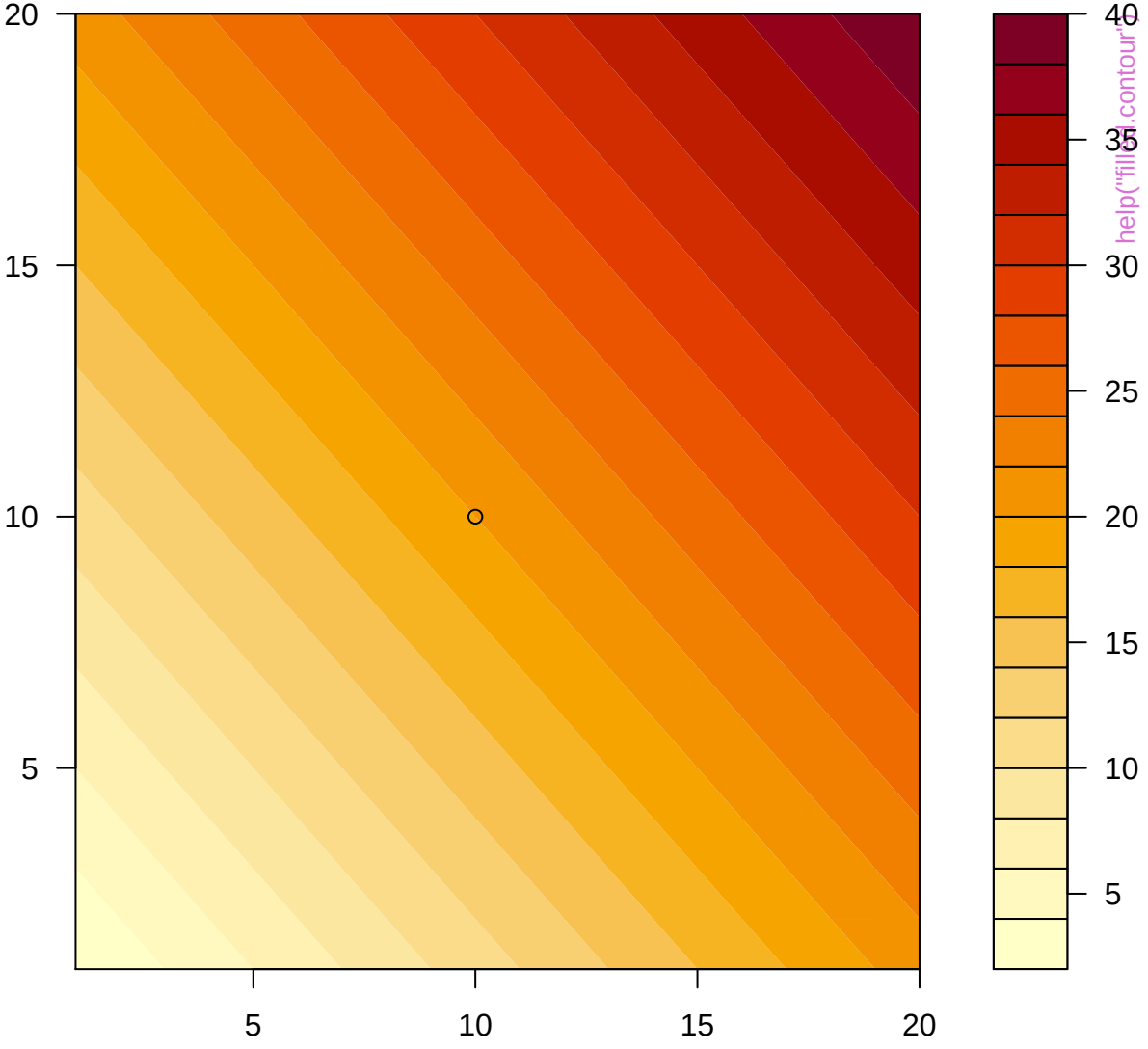

log(1 + x)
1
2
3
4
1
2
5
10
20
50
100
x
log = 'xy'

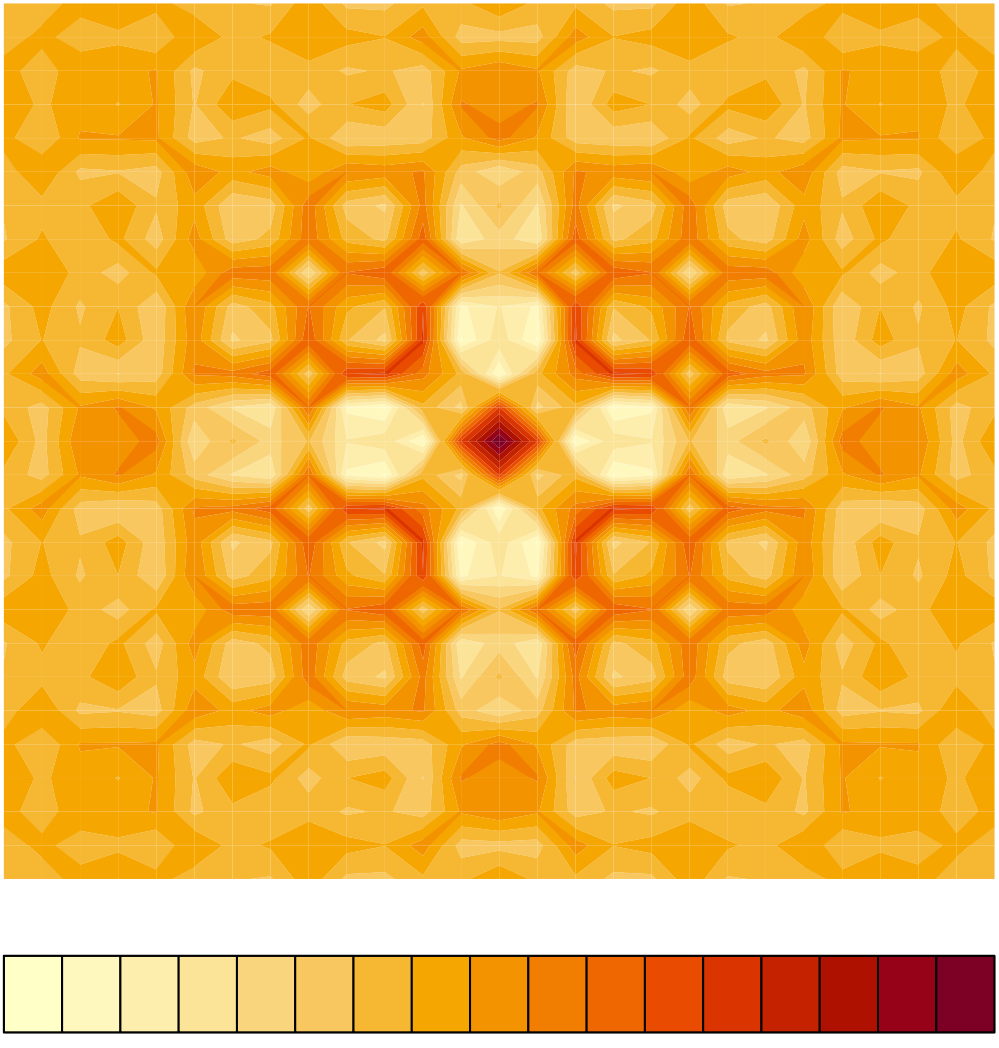

Death Rates in Virginia − 1940
Rural Male
70−74
65−69
60−64
55−59
50−54
Rural Female
70−74
65−69
60−64
55−59
50−54
Urban Male
70−74
65−69
60−64
55−59
50−54
Urban Female
70−74
65−69
60−64
55−59
50−54
10
20
30
40
50
60
70
help("dotchart")


Death Rates in Virginia − 1940
50−54
Urban Female
Urban Male
Rural Female
Rural Male
55−59
Urban Female
Urban Male
Rural Female
Rural Male
60−64
Urban Female
Urban Male
Rural Female
Rural Male
65−69
Urban Female
Urban Male
Rural Female
Rural Male
70−74
Urban Female
Urban Male
Rural Female
Rural Male
0
20
40
60
80
100
help("dotchart")

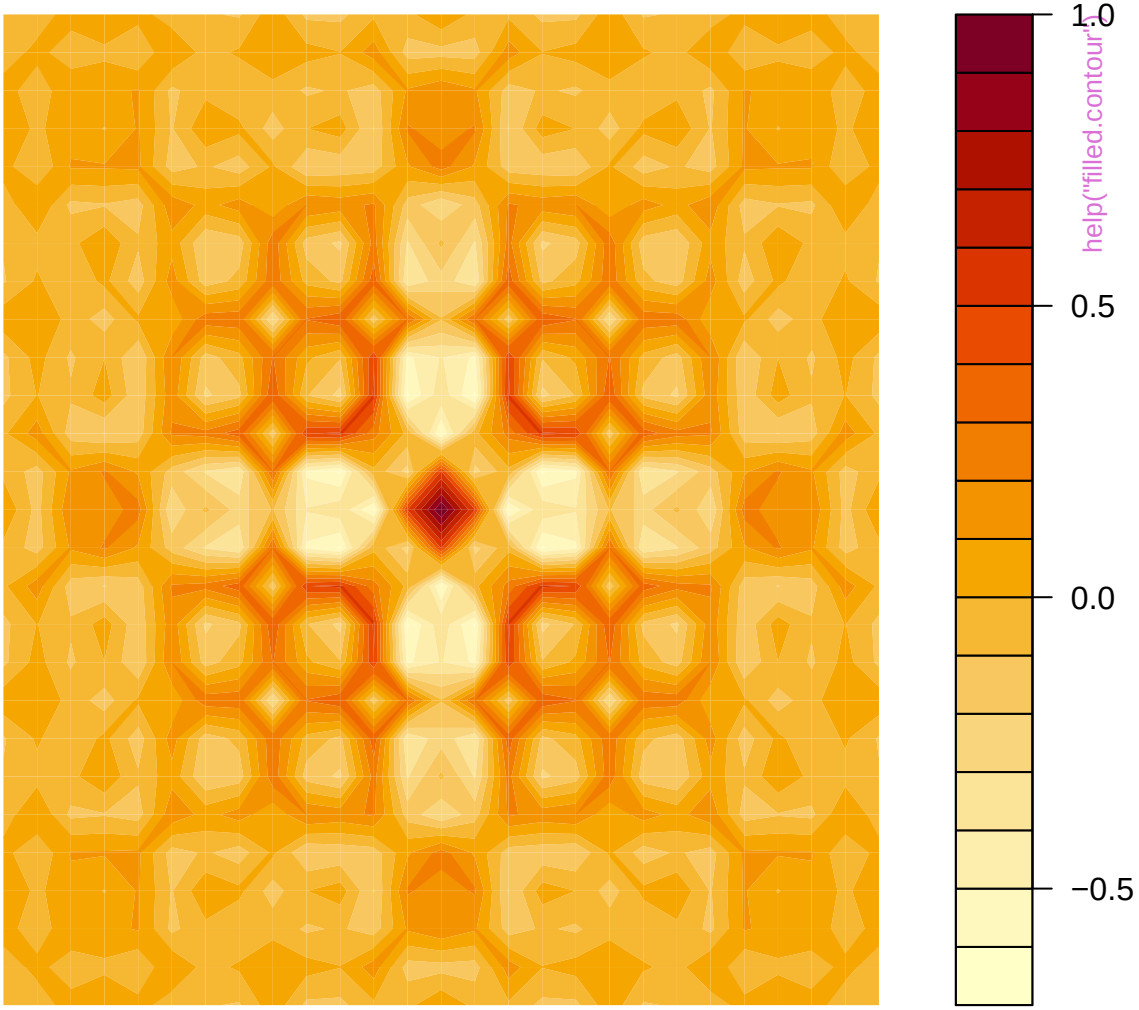

1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
180
160
140
120
100
help("filled.contour")

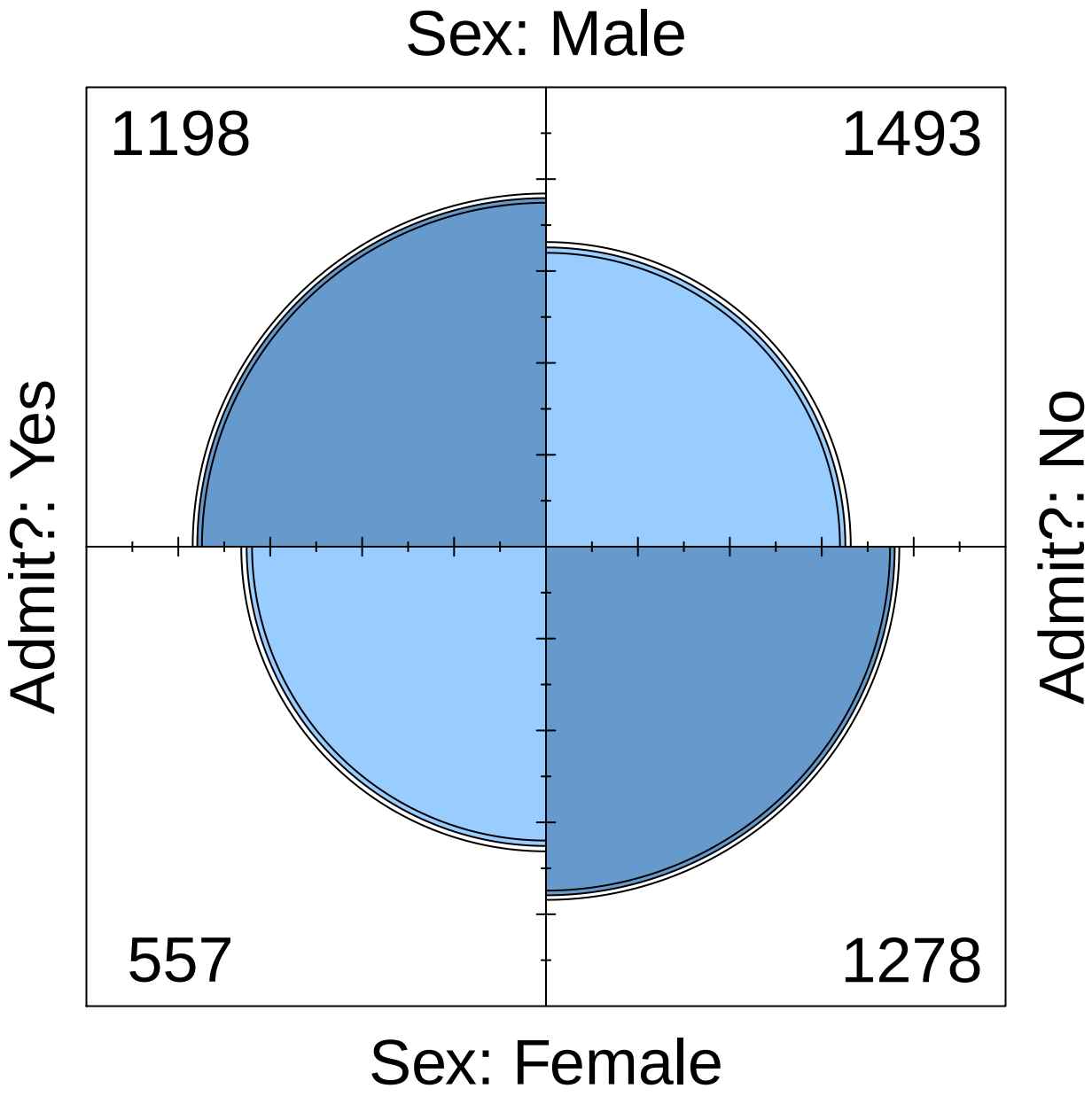

The Topography of Maunga Whau
Height (meters)
Meters West
Meters North
600
500
400
300
200
100
100
200
300
400
500
600
700
800
190
180
170
160
150
140
130
120
110
100
90
help("filled.contour")
filled.contour(.) from R version 3.6.0 (2019−04−26)


20
15
10
5
5
10
15
20
40
35
30
25
20
15
10
5
help("filled.contour")

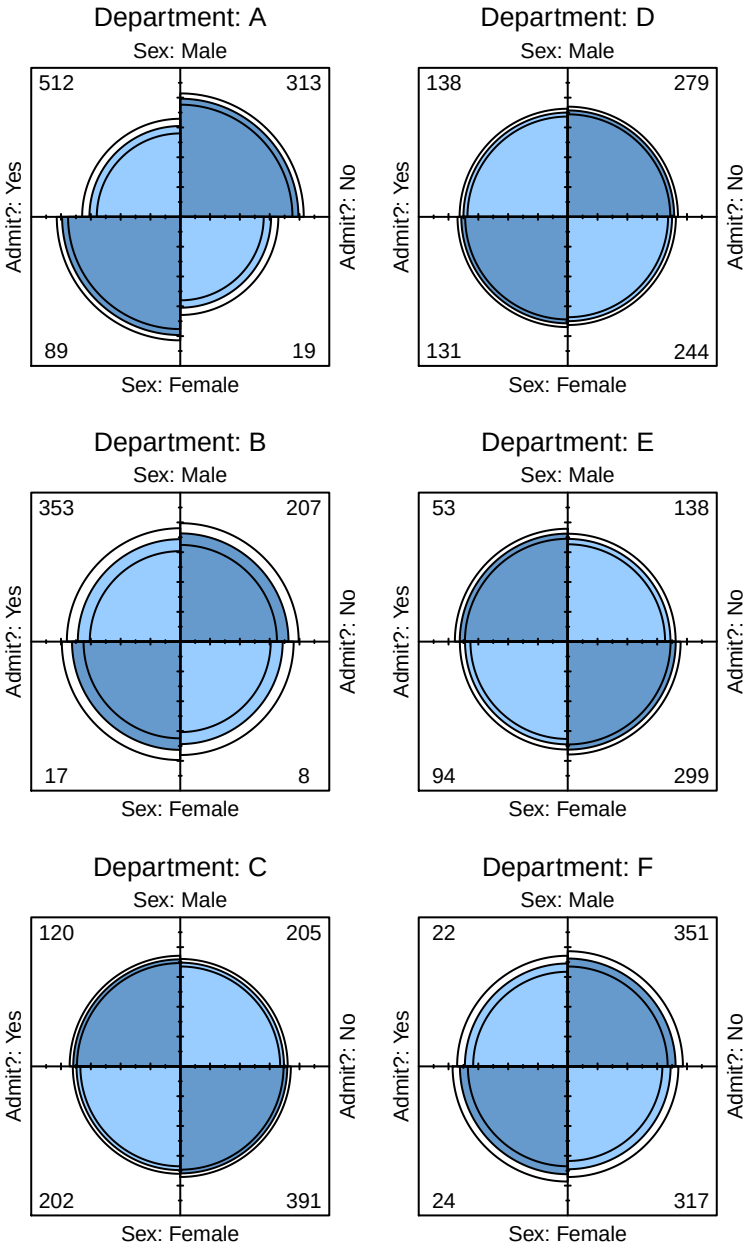


help("filled.contour")

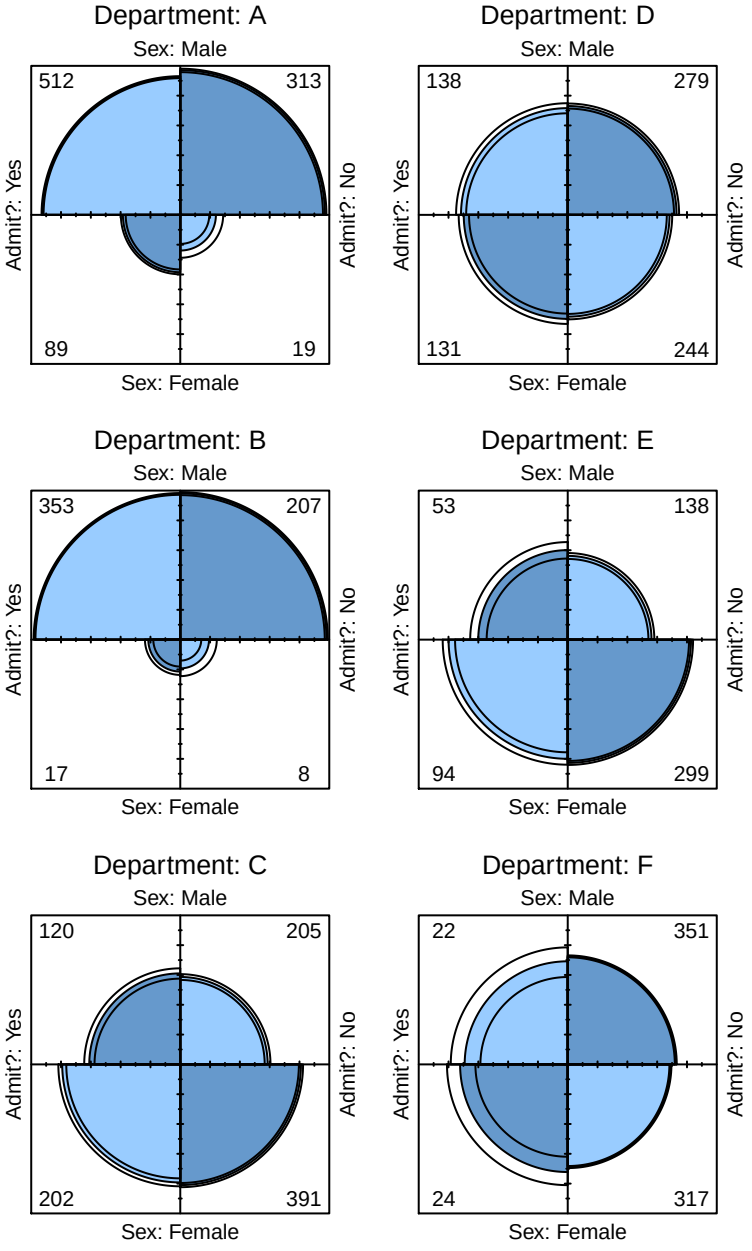

1.0
0.5
0.0
−0.5
help("filled.contour")



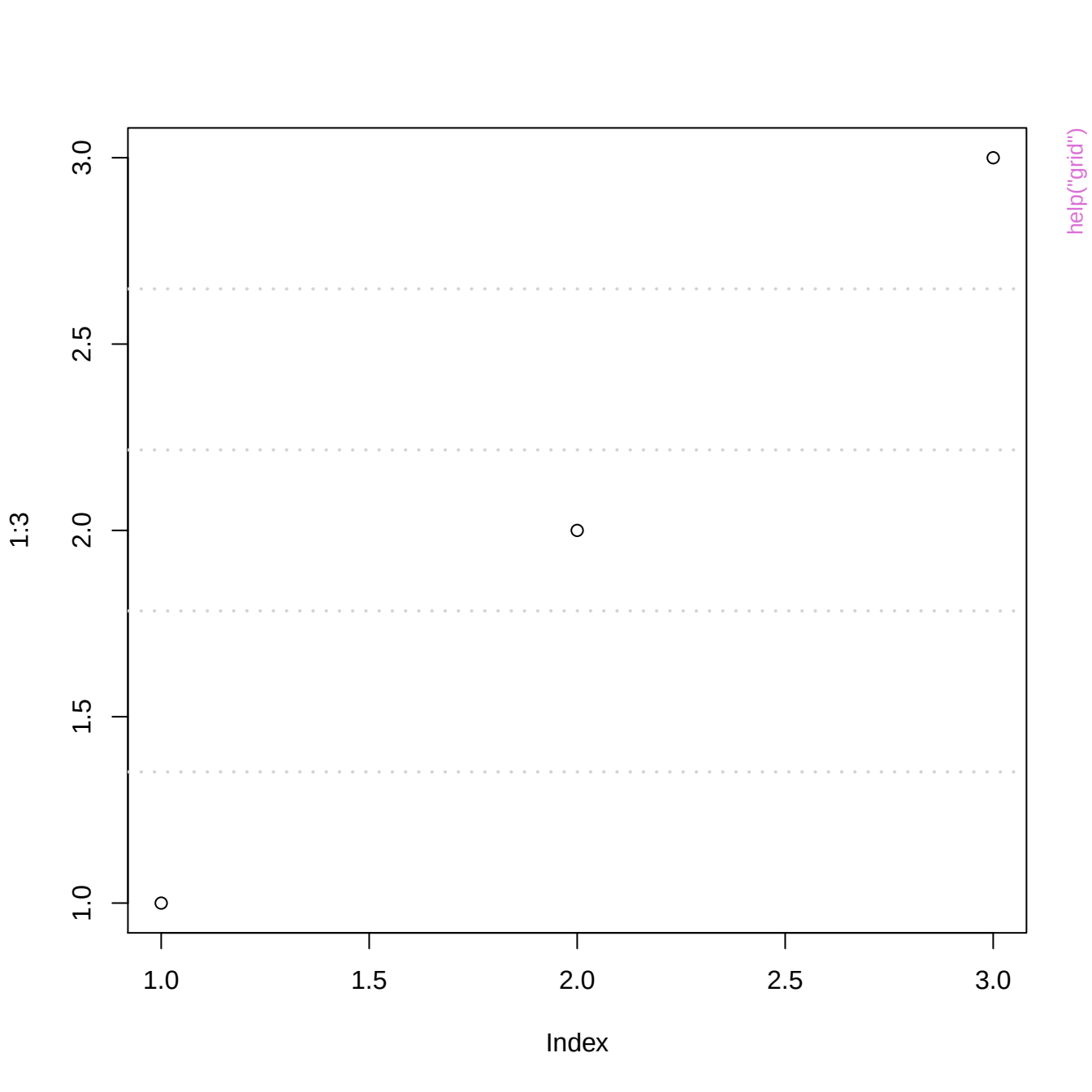
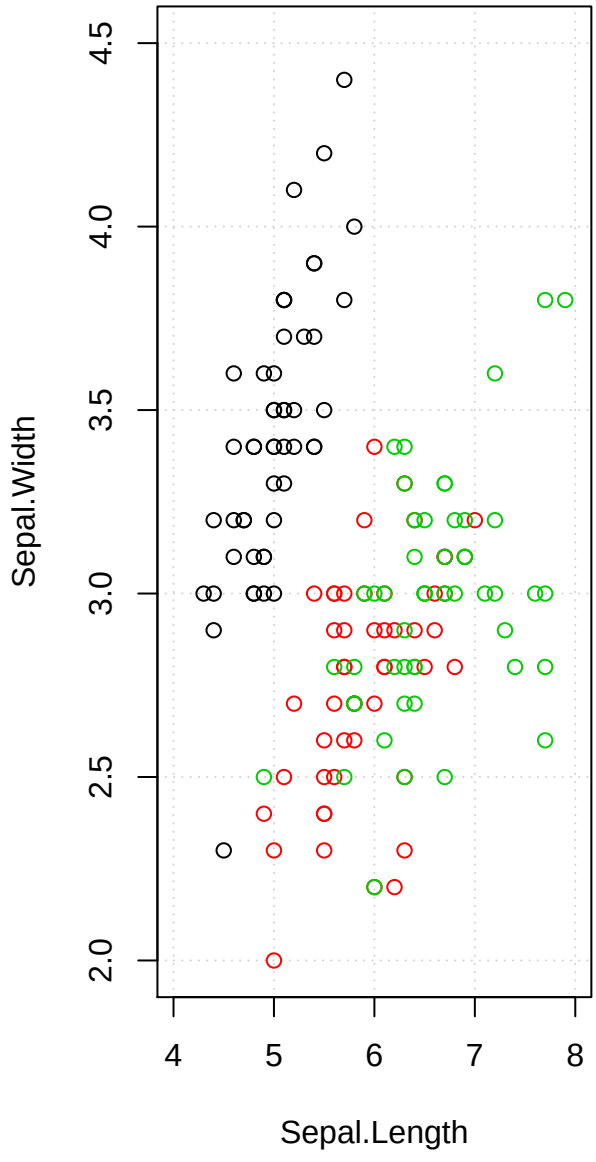
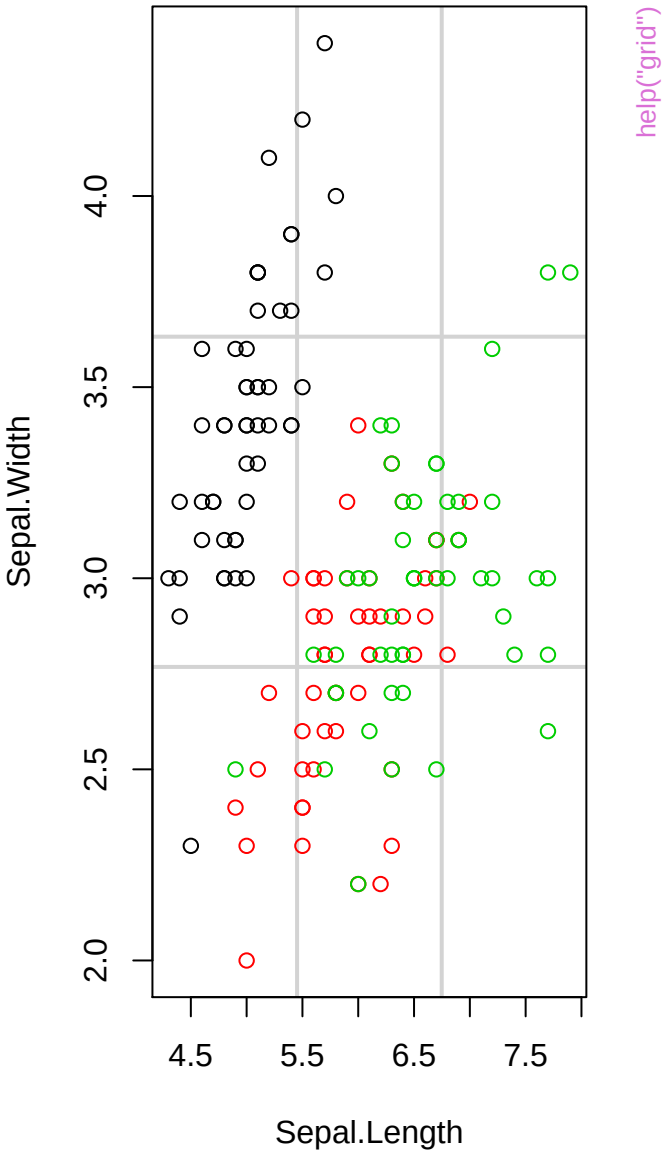
help("fourfoldplot")



help("fourfoldplot")



help("fourfoldplot")


1:3
3.0
2.5
2.0
1.5
1.0
1.0
1.5
2.0
2.5
3.0
Index
help("grid")

with(iris, plot(...., panel.first = grid(), ... panel.first = grid(3, lty = 1, lwd = 2)