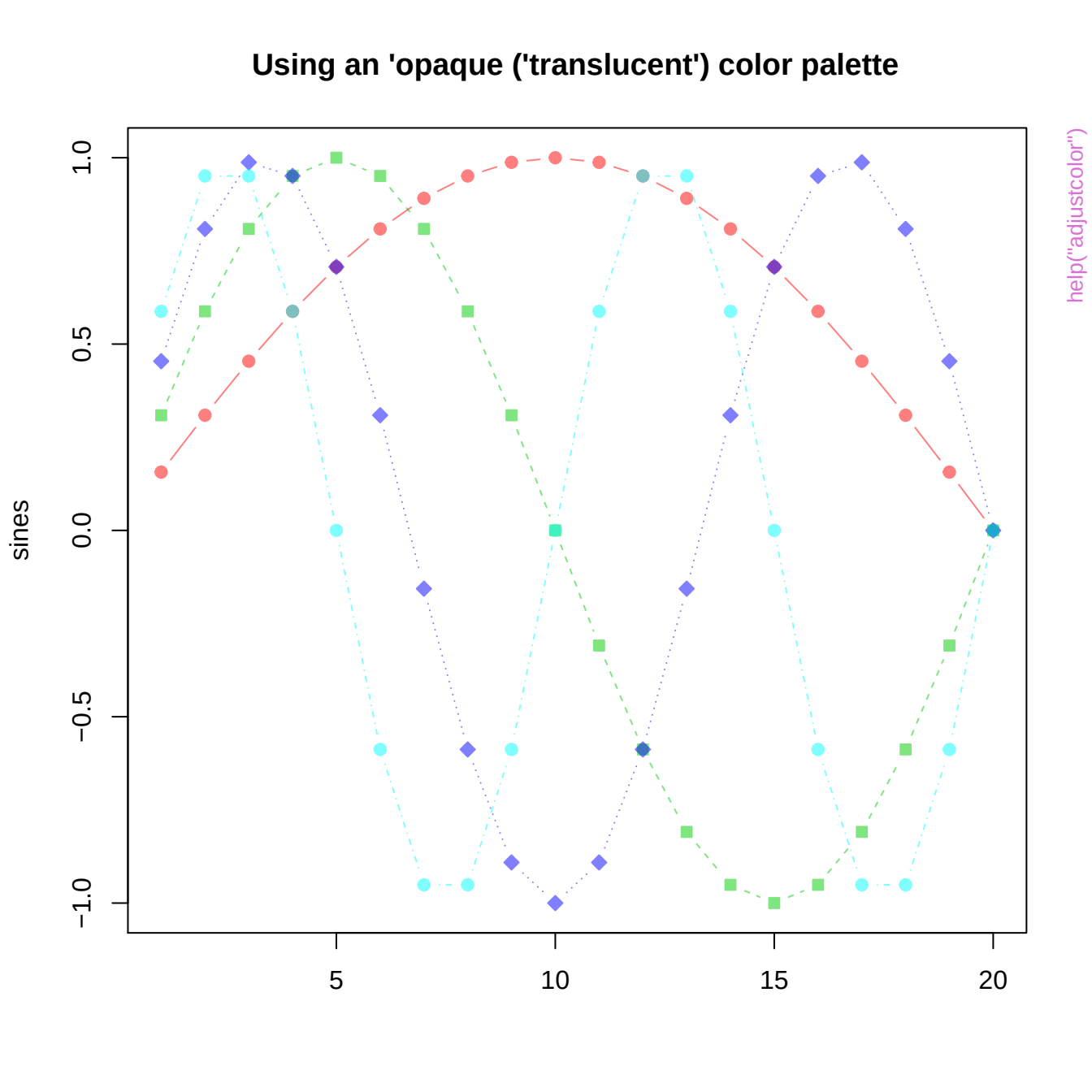
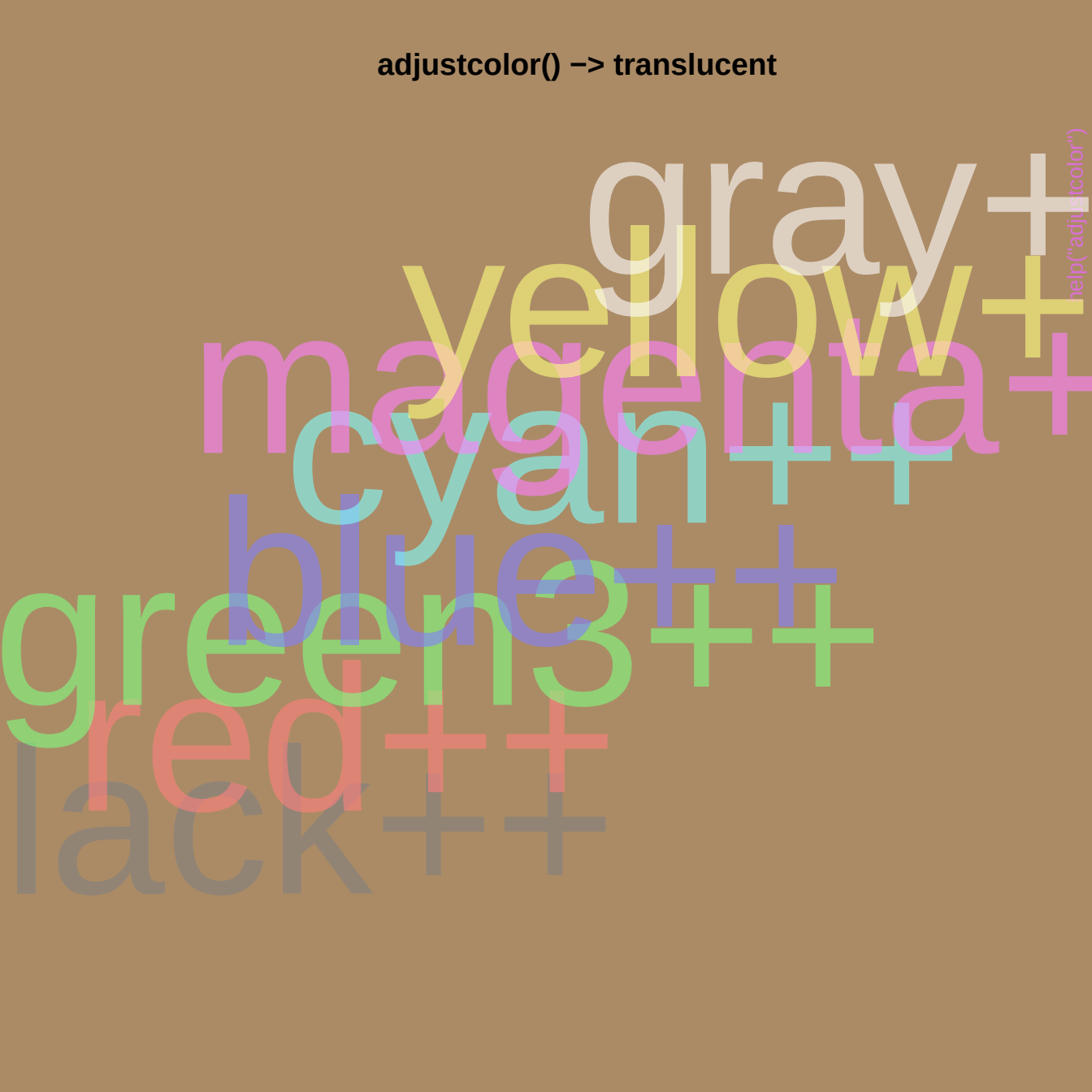
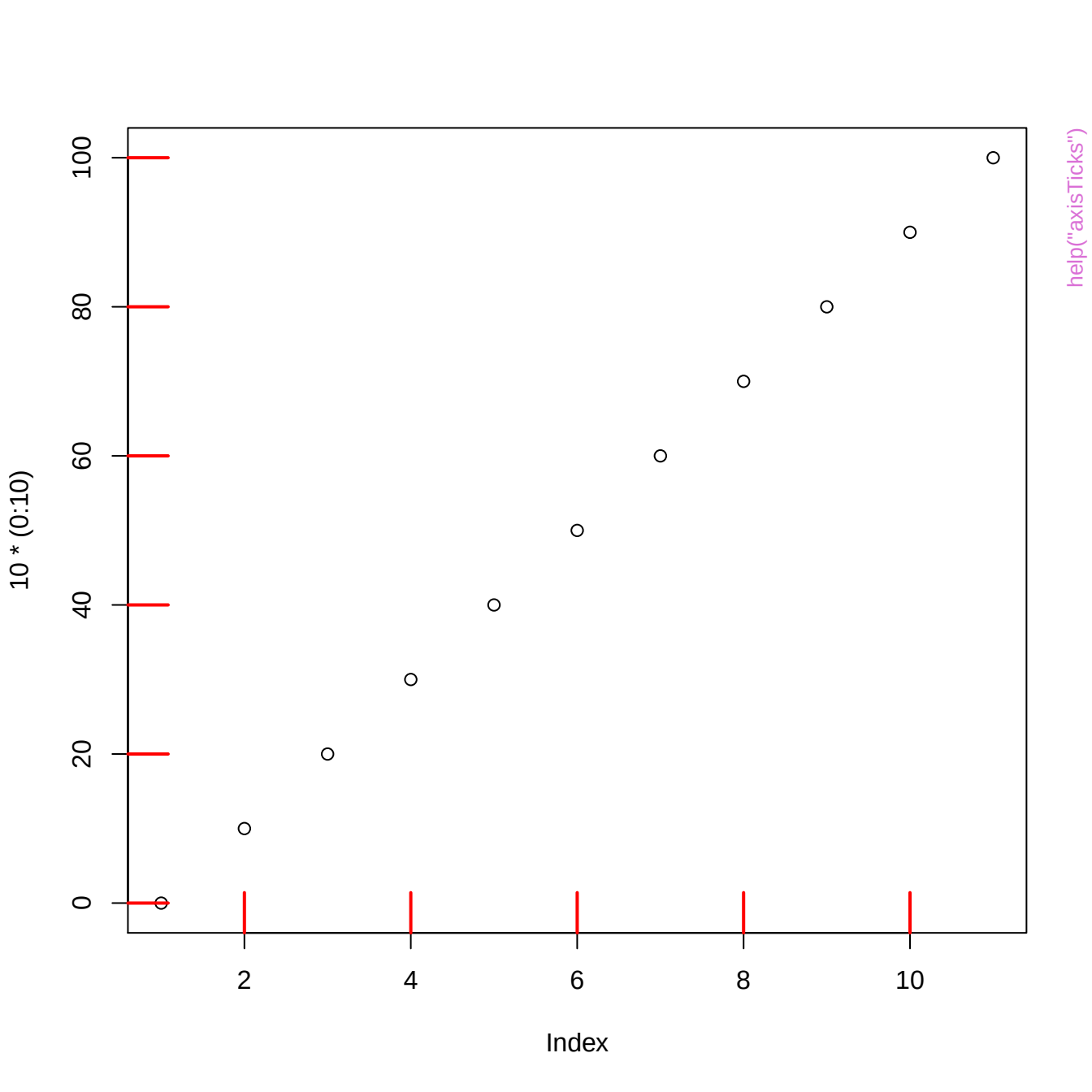
example(Japanese)

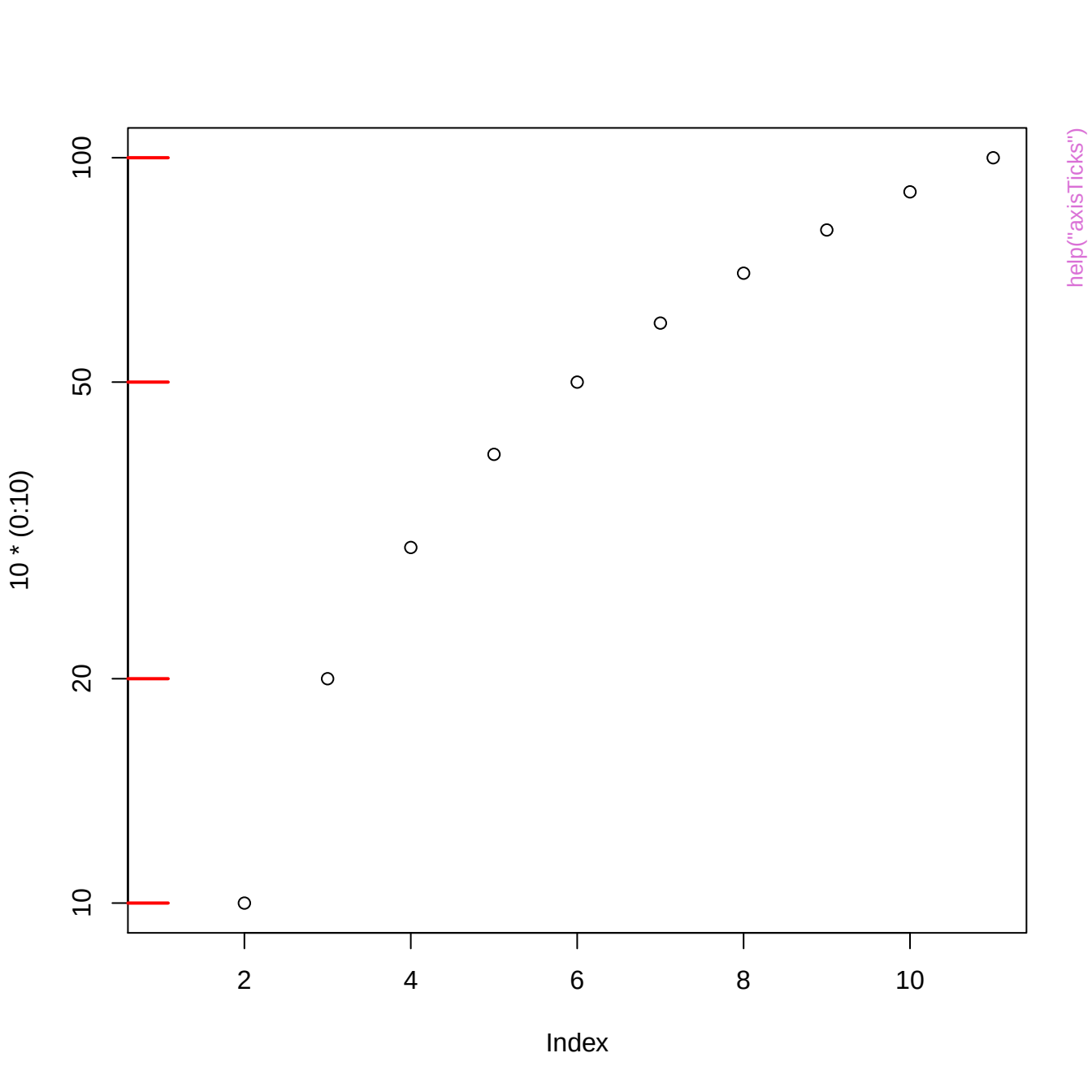
help("Japanese")

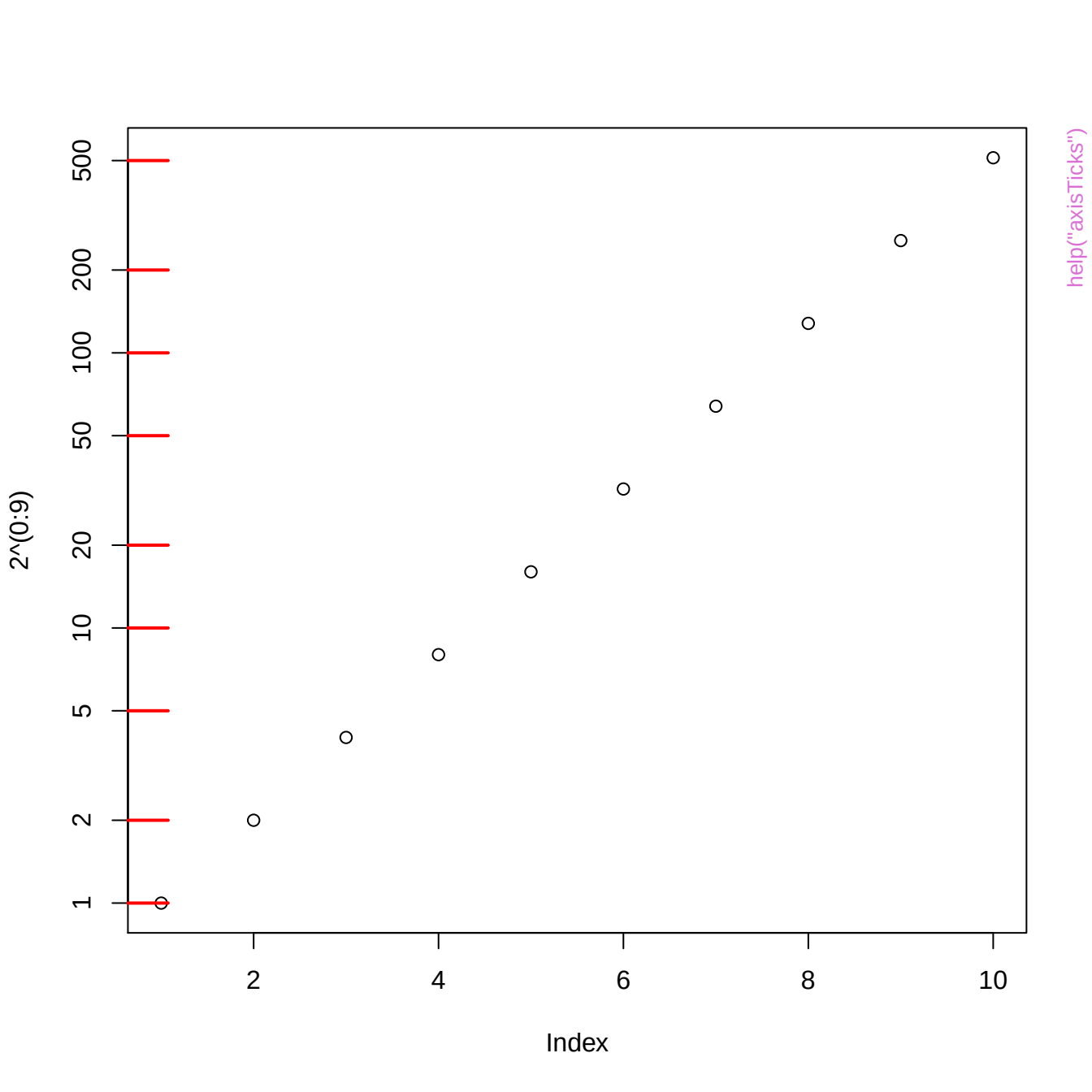
using Hershey fonts

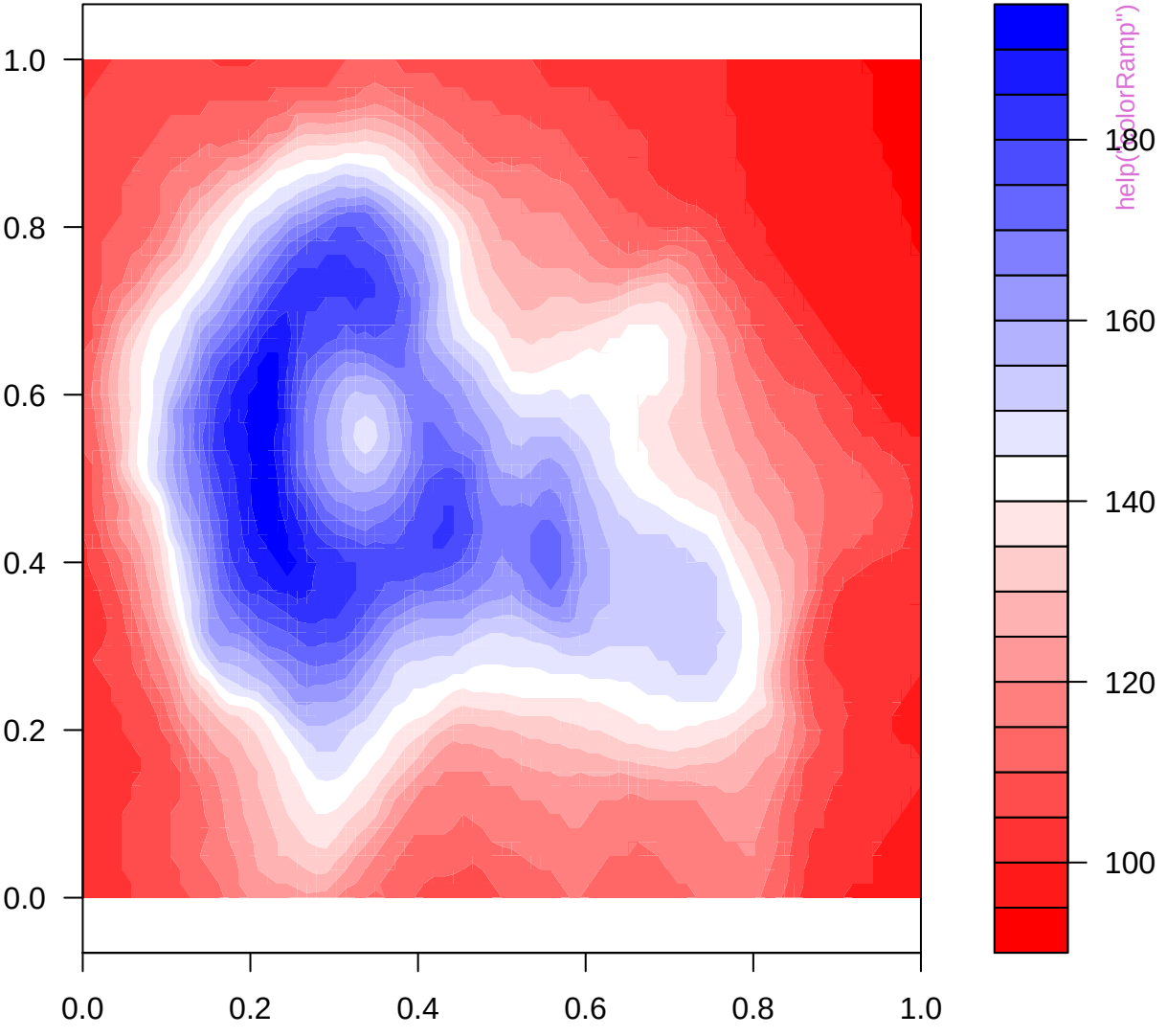

Using an 'opaque ('translucent') color palette
sines
1.0
0.5
0.0
−0.5
−1.0
5
10
15
20
help("adjustcolor")

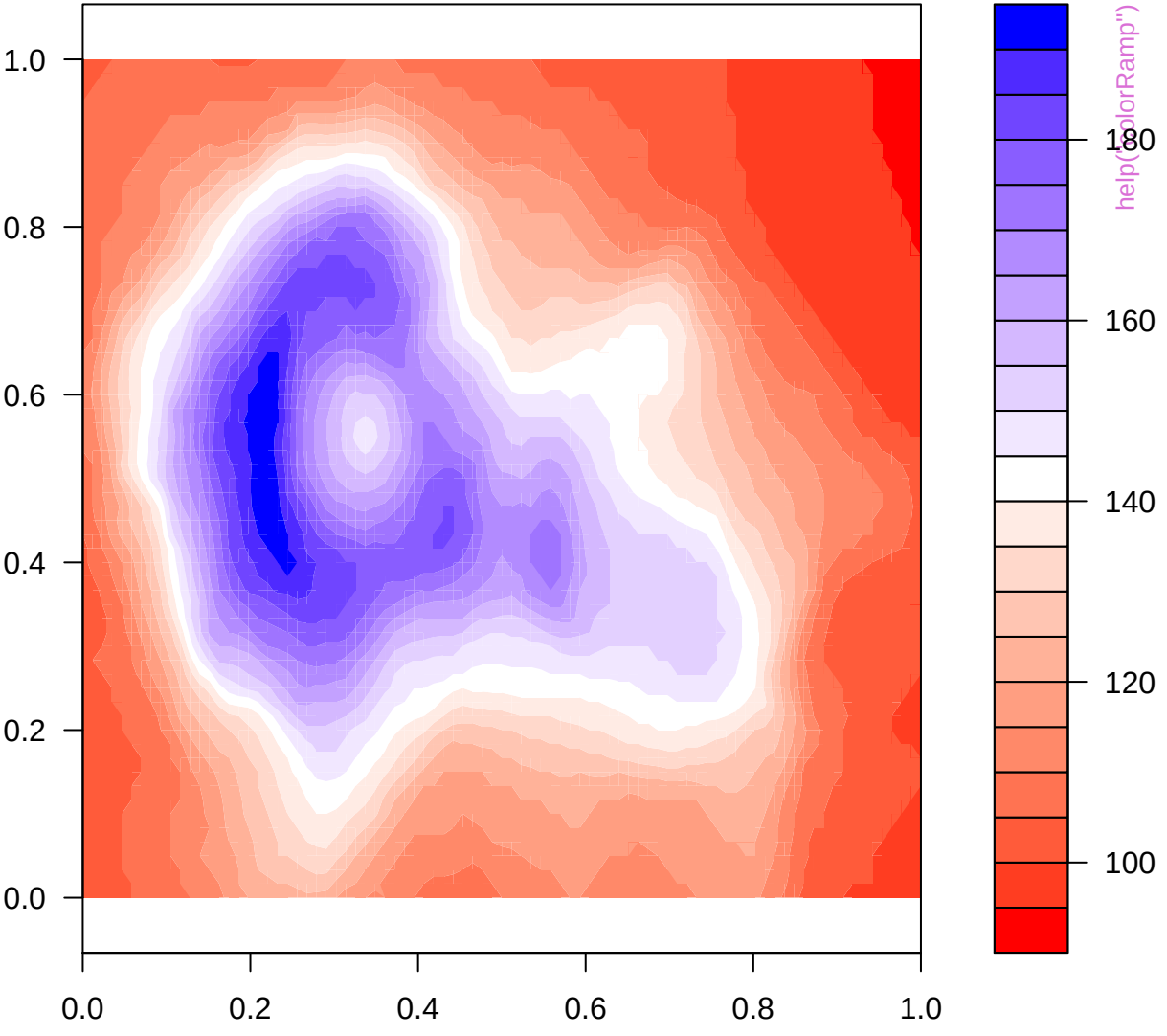

adjustcolor() -> translucent
help("adjustcolor")
gray++
yellow++
magenta++
cyan+++
blue+++
green3++
red++
lack++

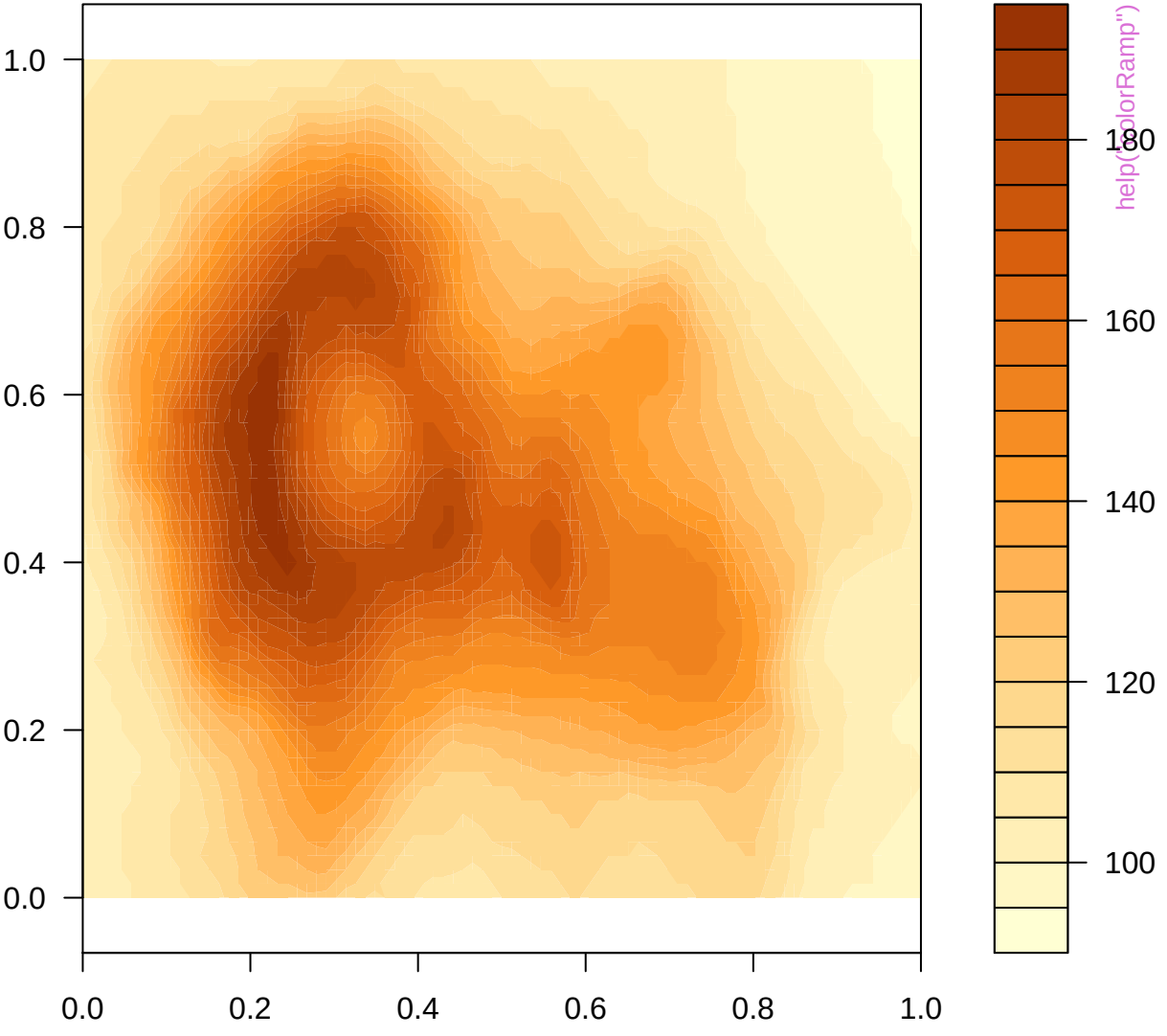

10 * (0:10)
0
20
40
60
80
100
2
4
6
8
10
Index
help("axisTicks")

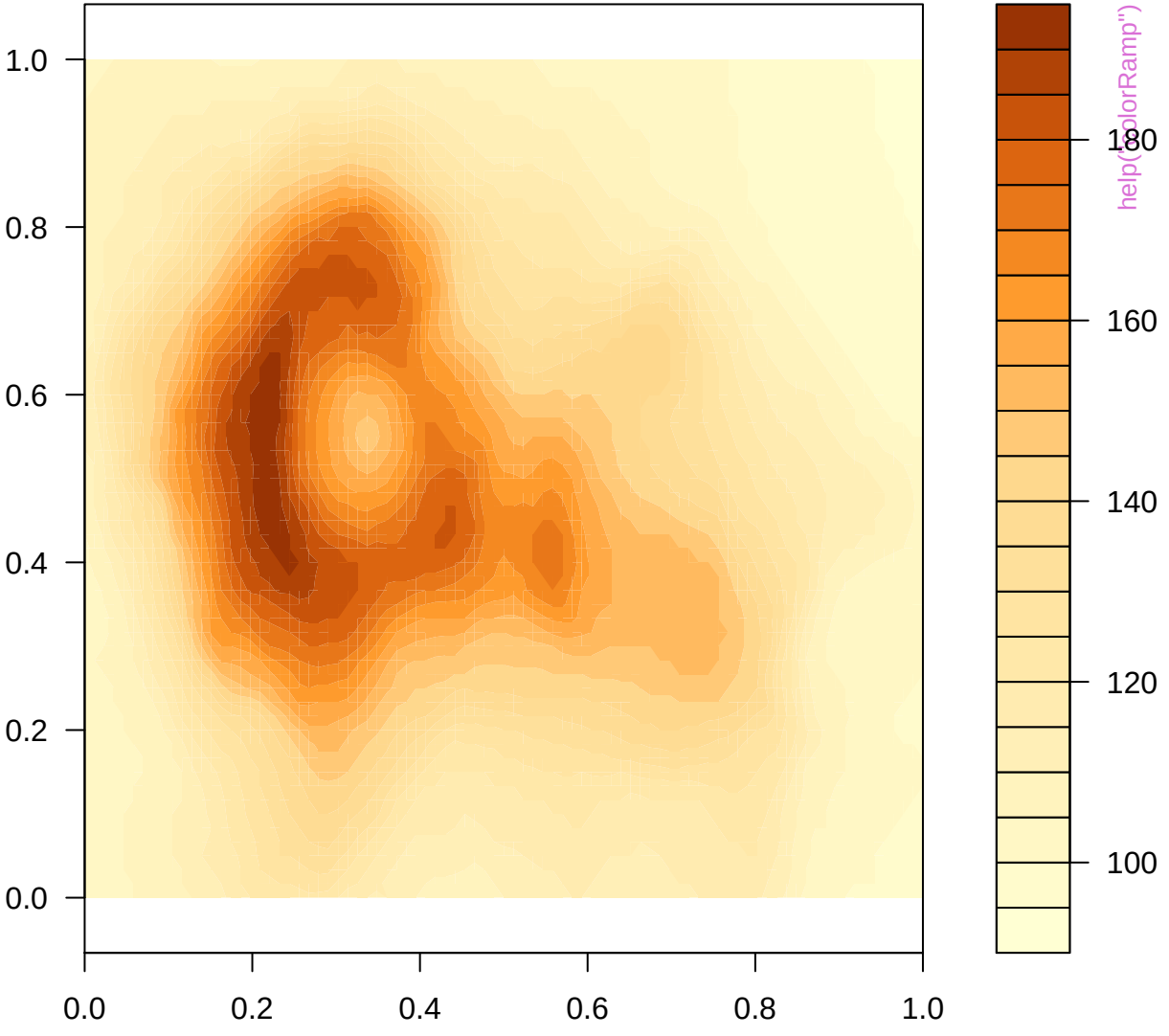

help("axisTicks")
10 * (0:10)
100
50
20
10
2
4
6
8
10
Index

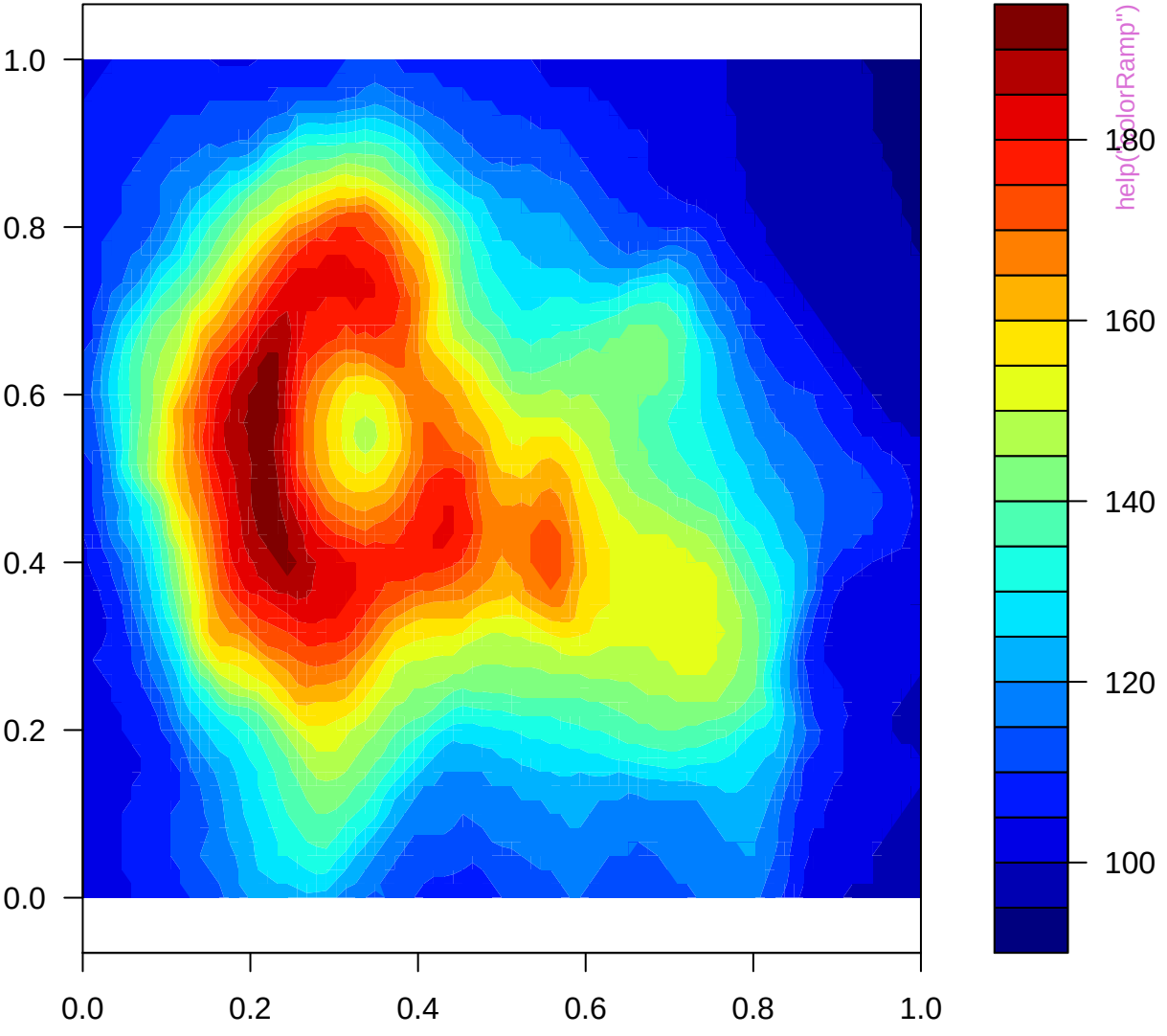

2^(0:9)
1
2
5
10
20
50
100
200
500
2
4
6
8
10
Index
help("axisTicks")

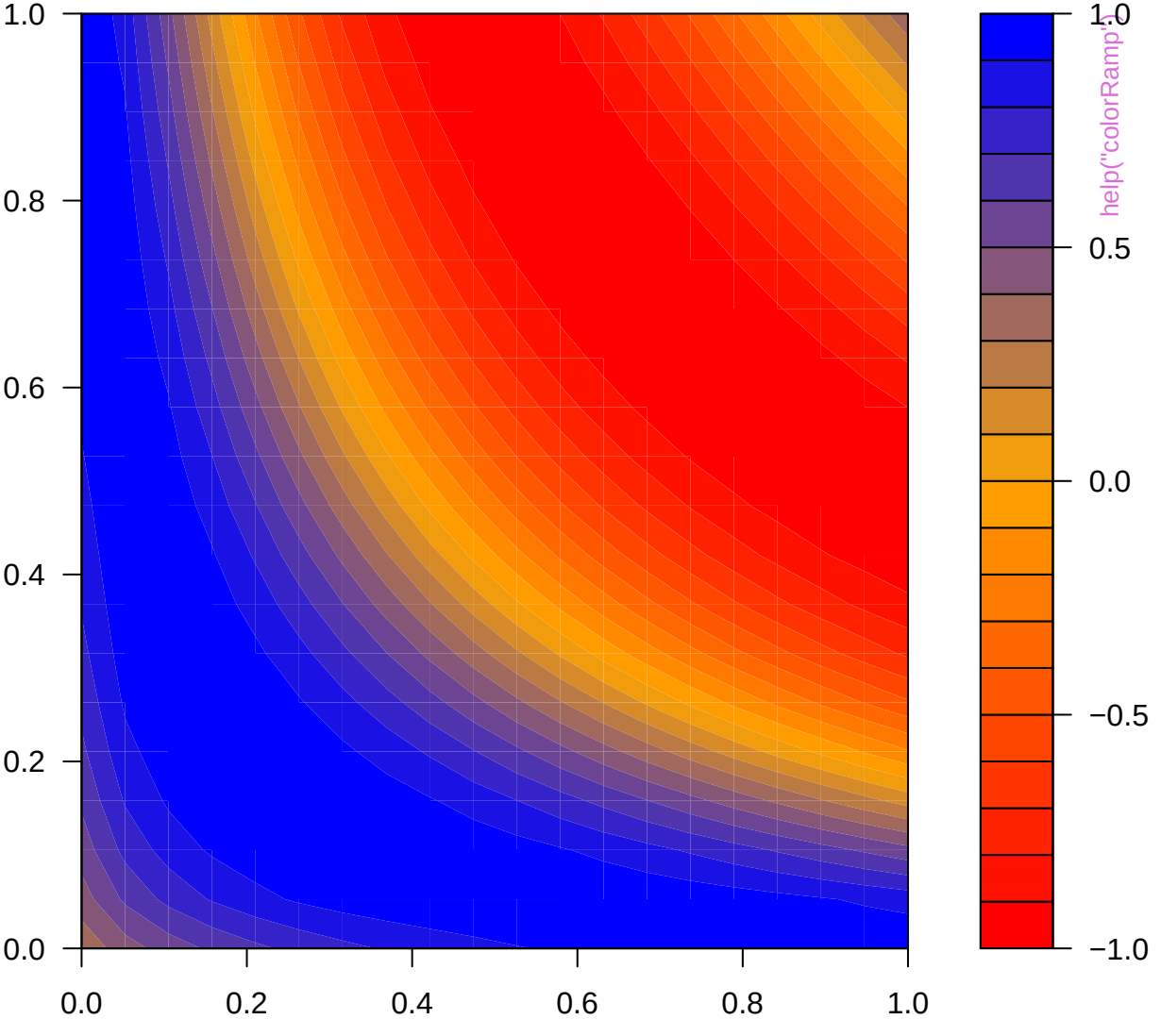

1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
180
160
140
120
100
help("colorRamp")

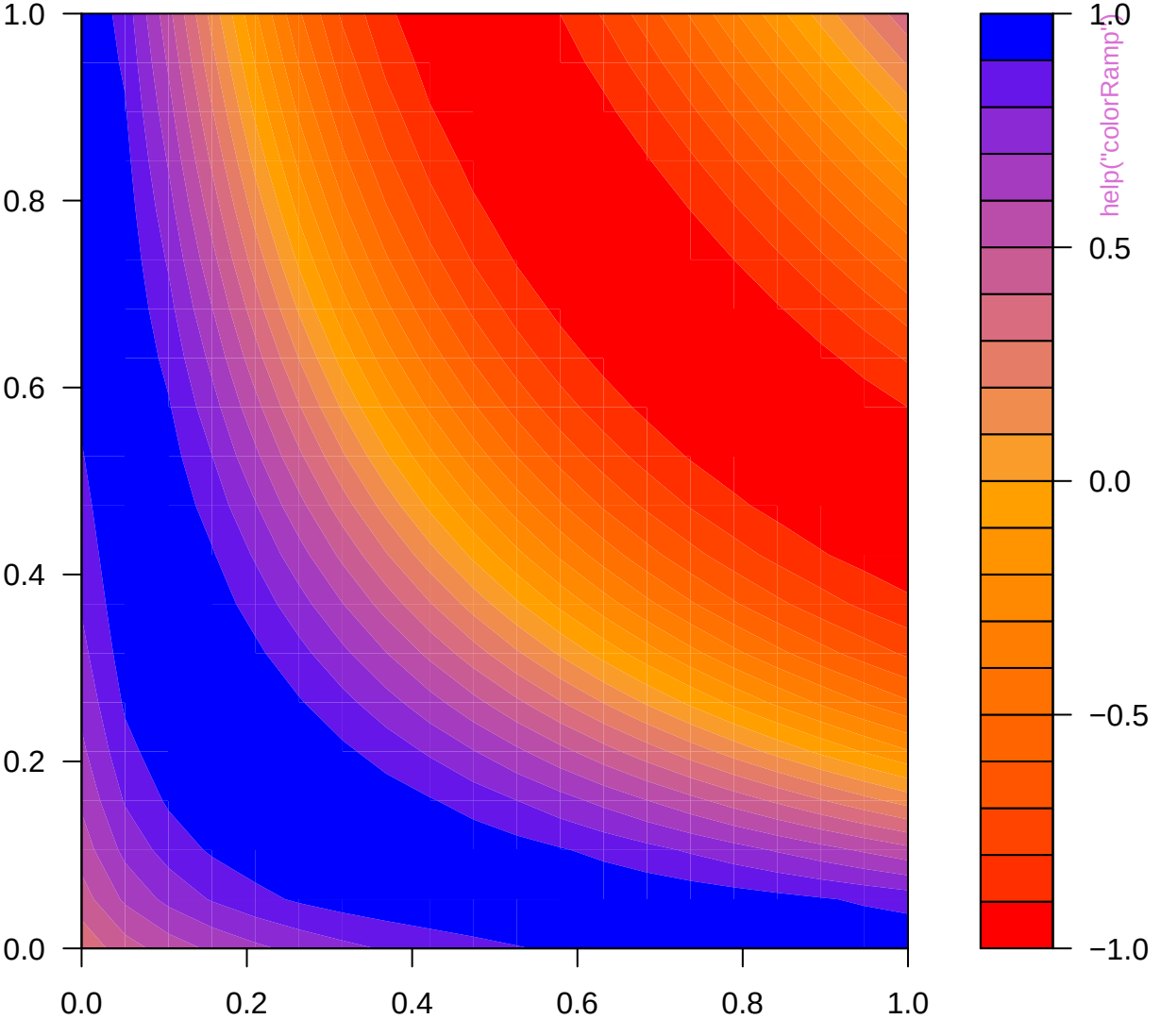

1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
180
160
140
120
100
help("colorRamp")

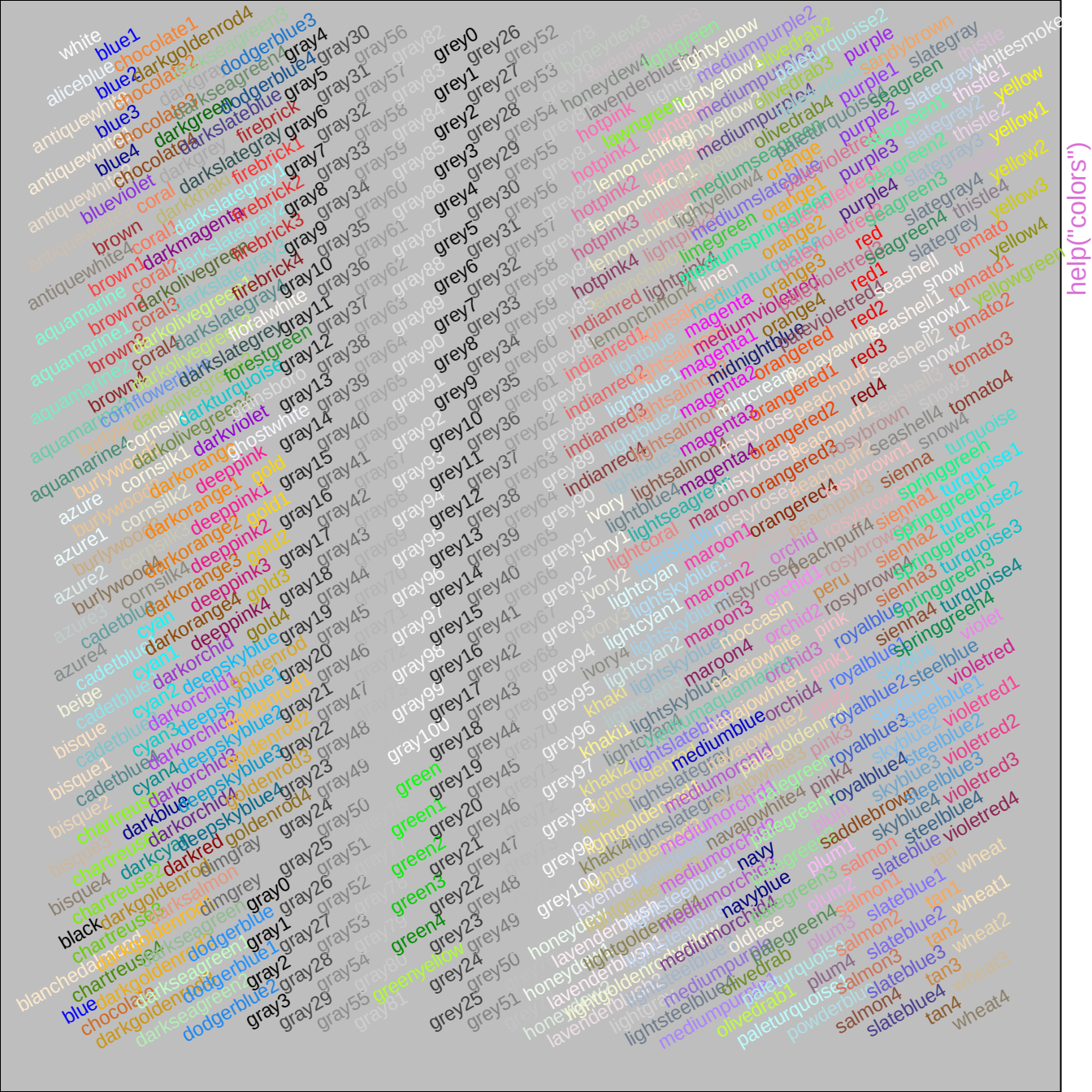

1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
180
160
140
120
100
help("colorRamp")

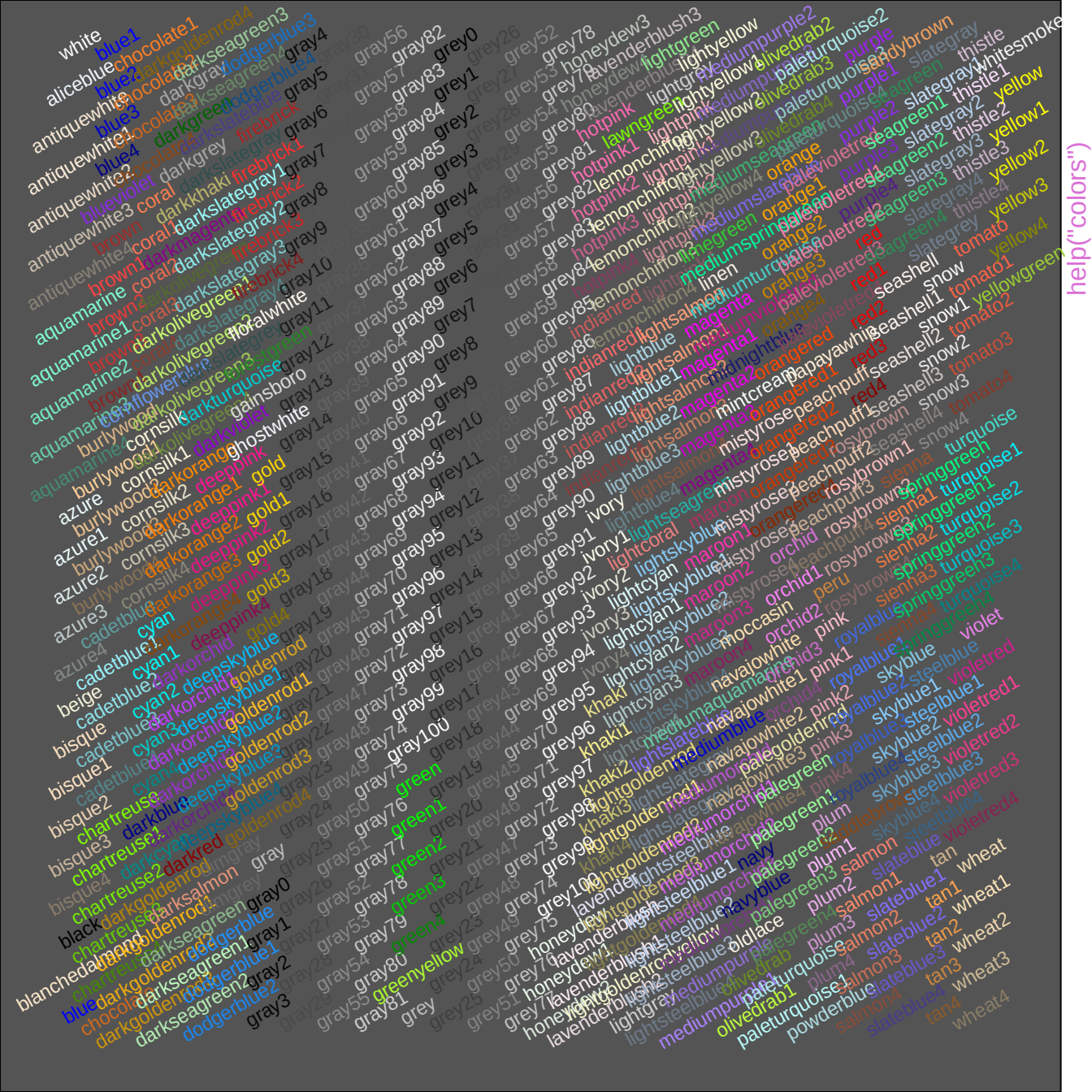

1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
180
160
140
120
100
help("colorRamp")

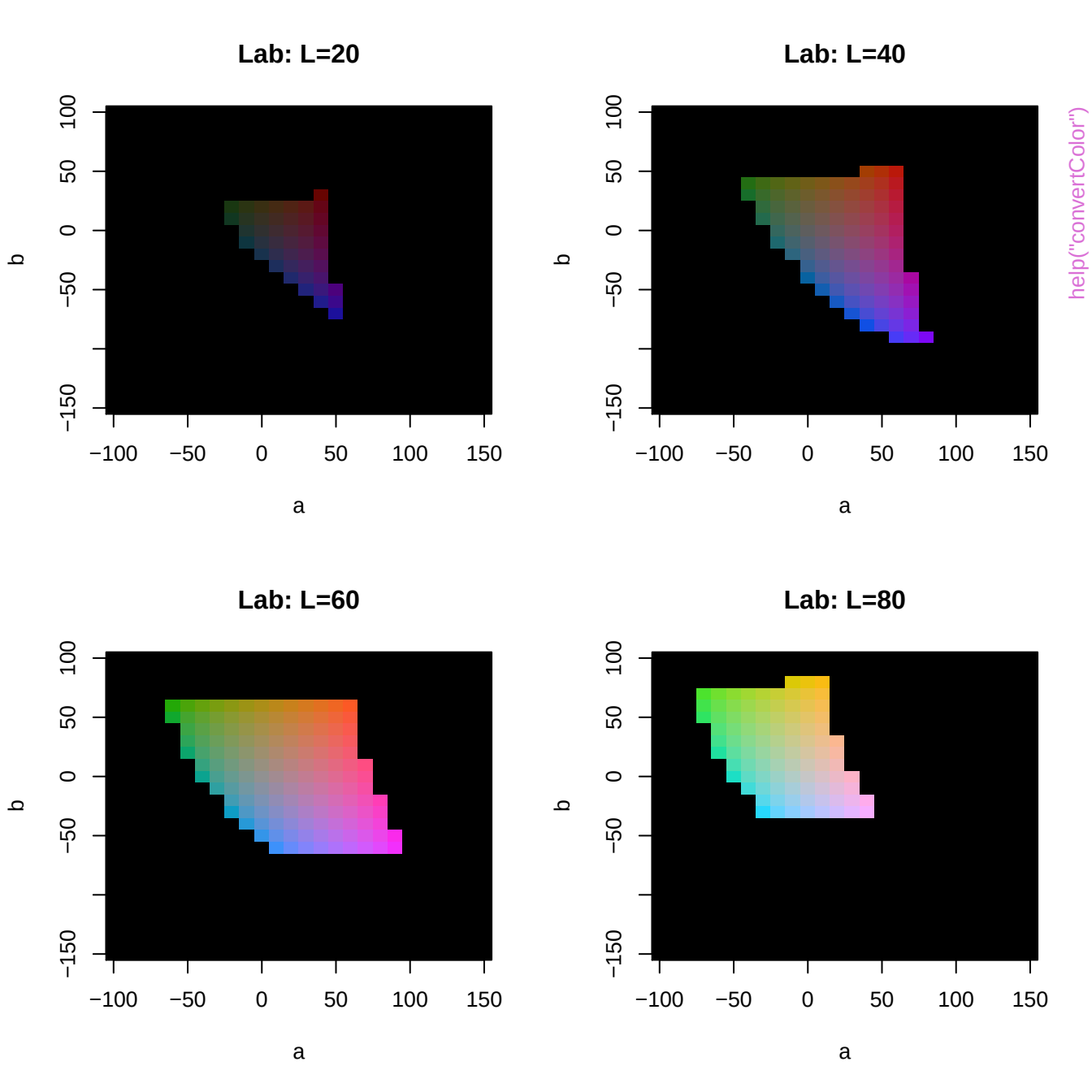

1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
180
160
140
120
100
help("colorRamp")

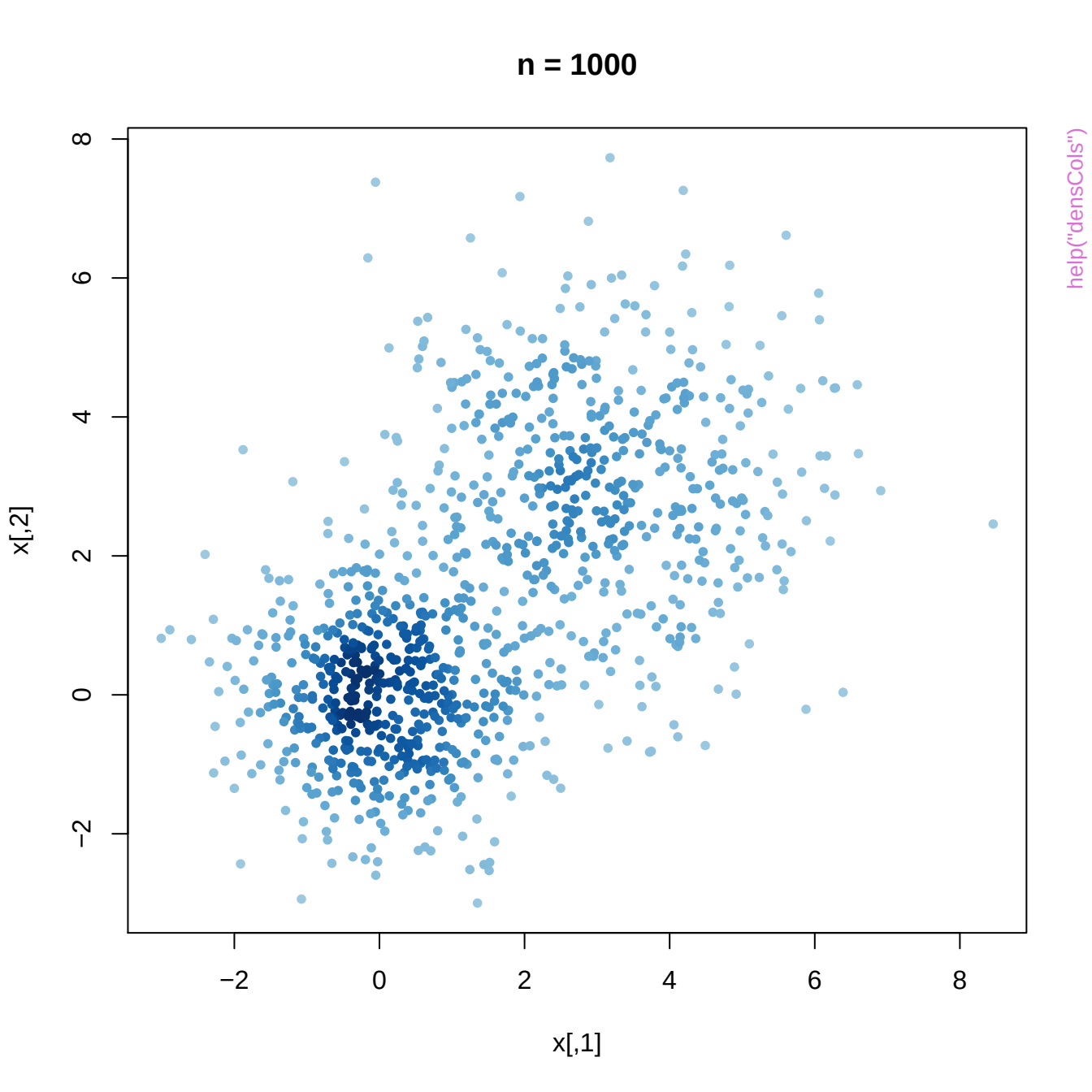

1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
help("colorRamp")
1.0
0.5
0.0
−0.5
−1.0

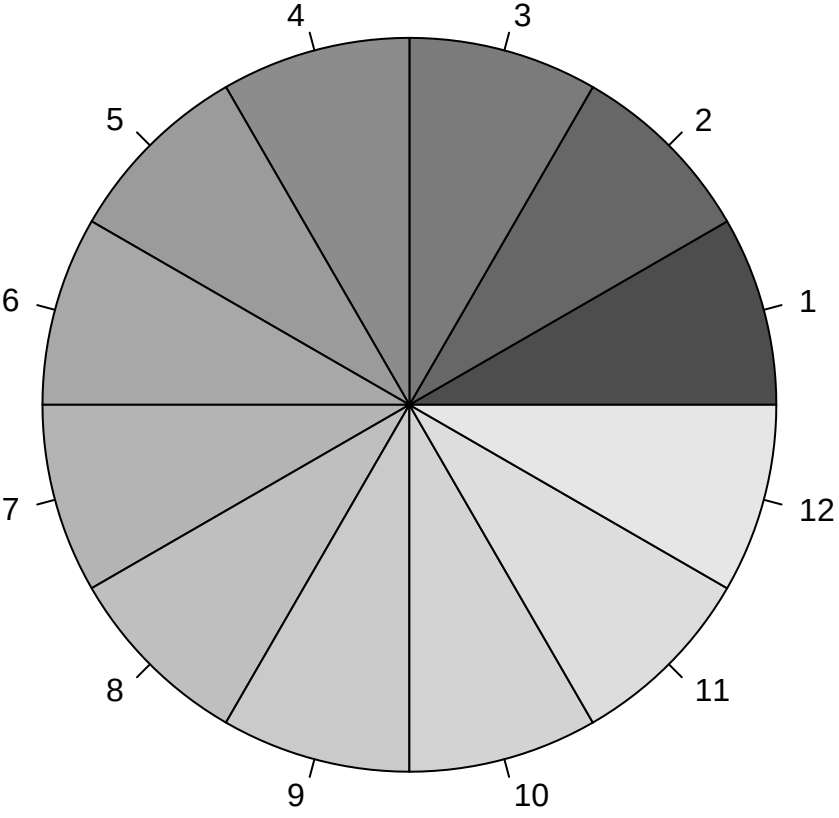

1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
help("colorRamp")
1.0
0.5
0.0
−0.5
−1.0


help("colors")

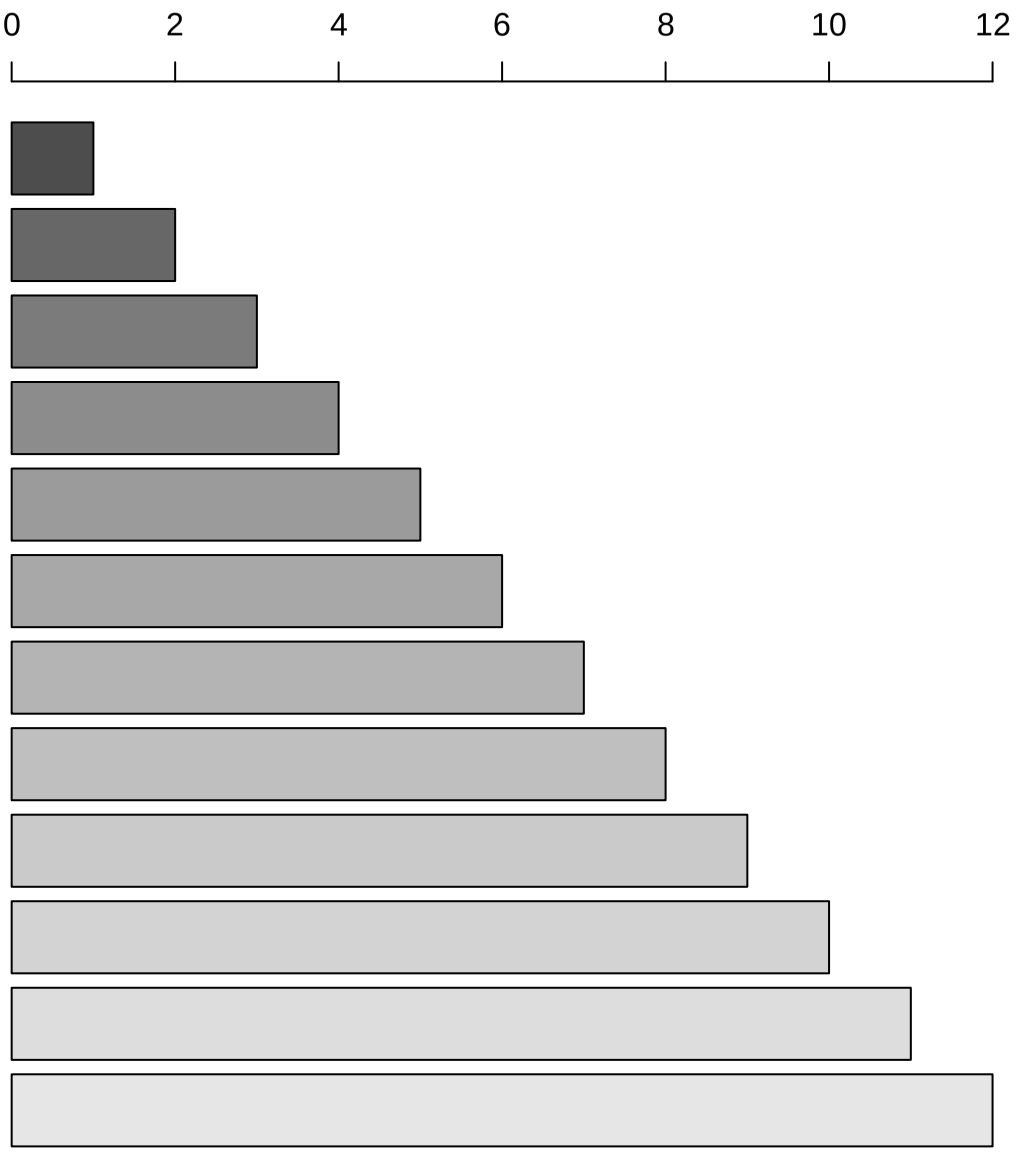

help("colors")


Lab: L=20
Lab: L=40
Lab: L=60
Lab: L=80
b
a
100
50
0
−50
−150
−100
−50
0
50
100
150
help("convertColor")

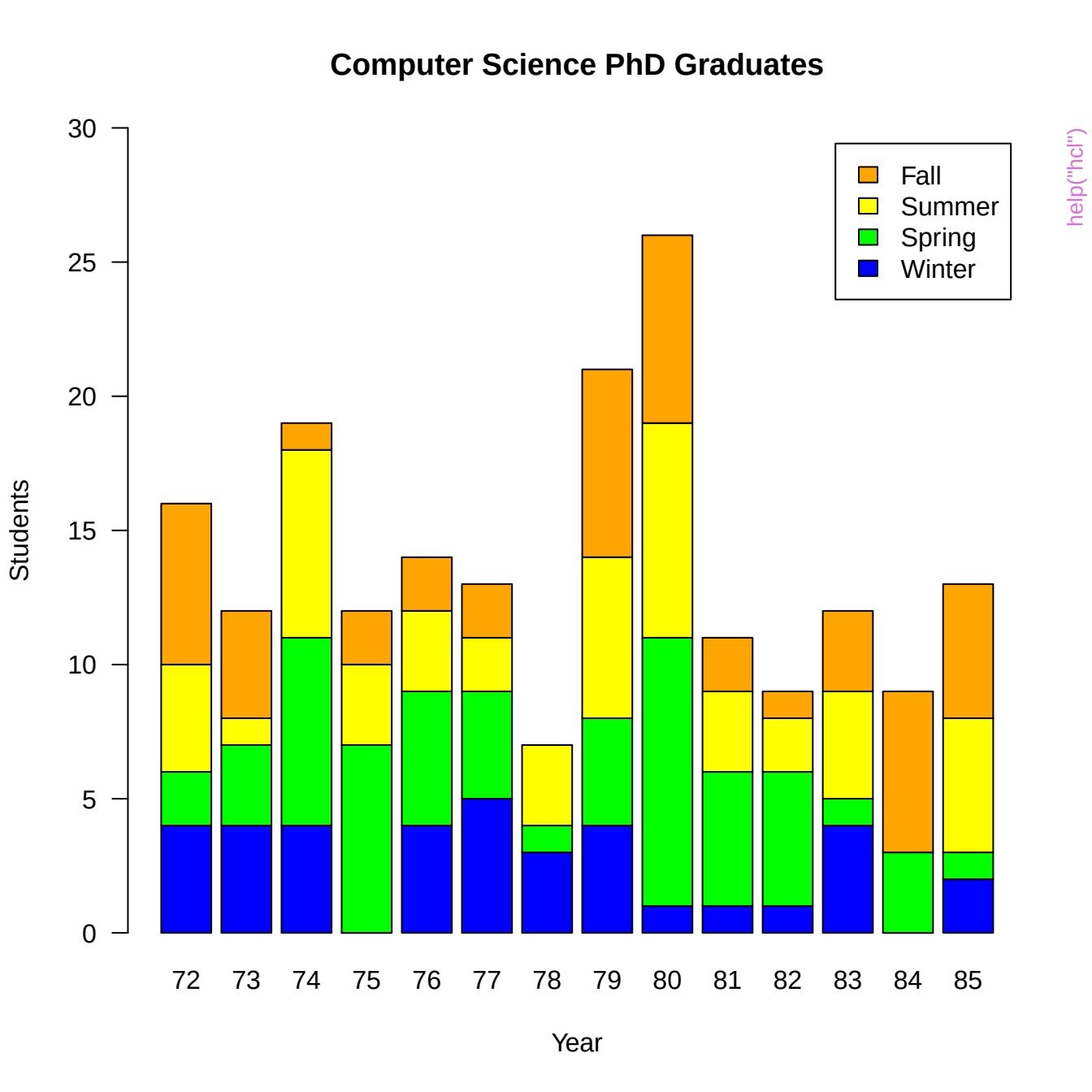

n = 1000
x[,2]
x[,1]
8
6
4
2
0
−2
−2
0
2
4
6
8
help("densCols")

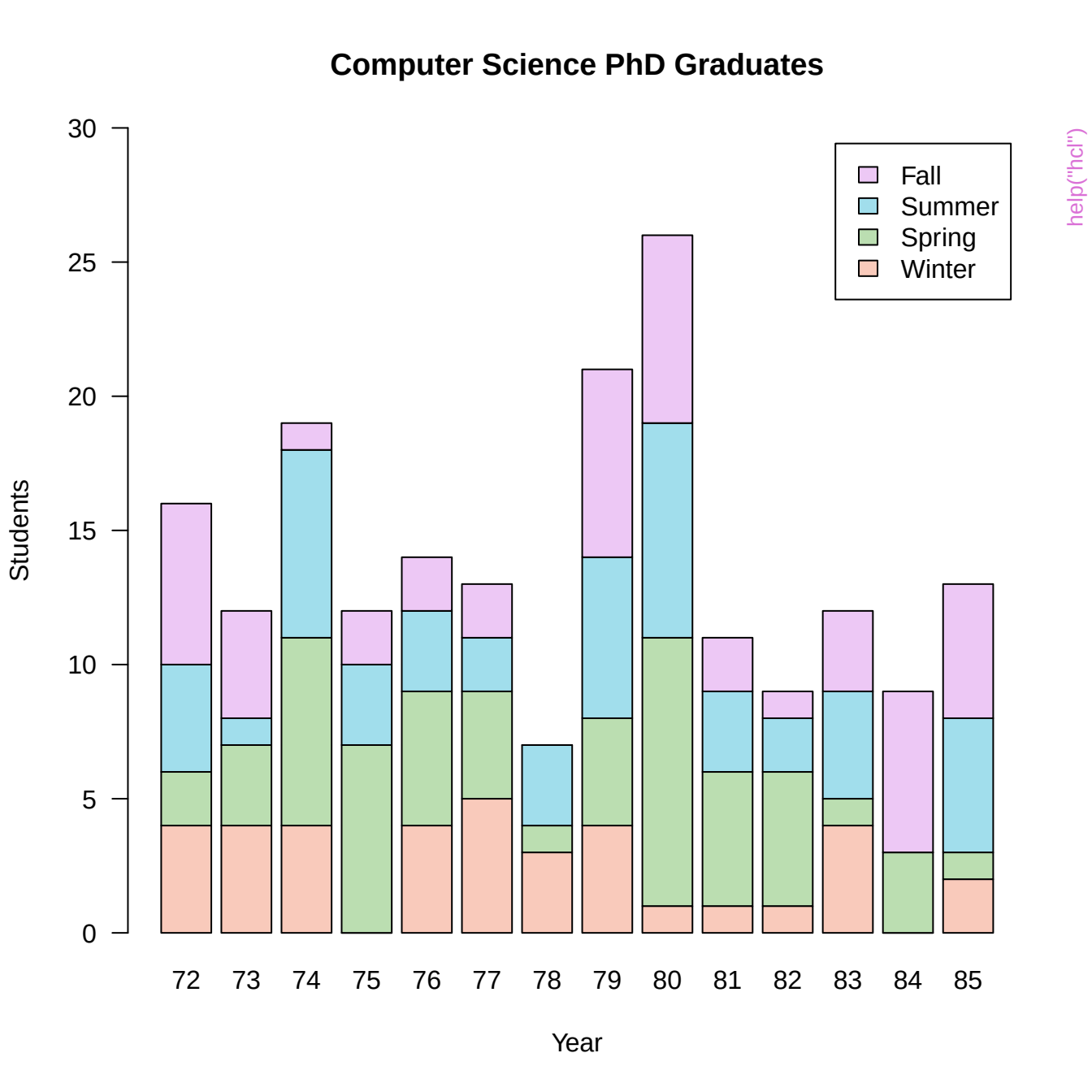


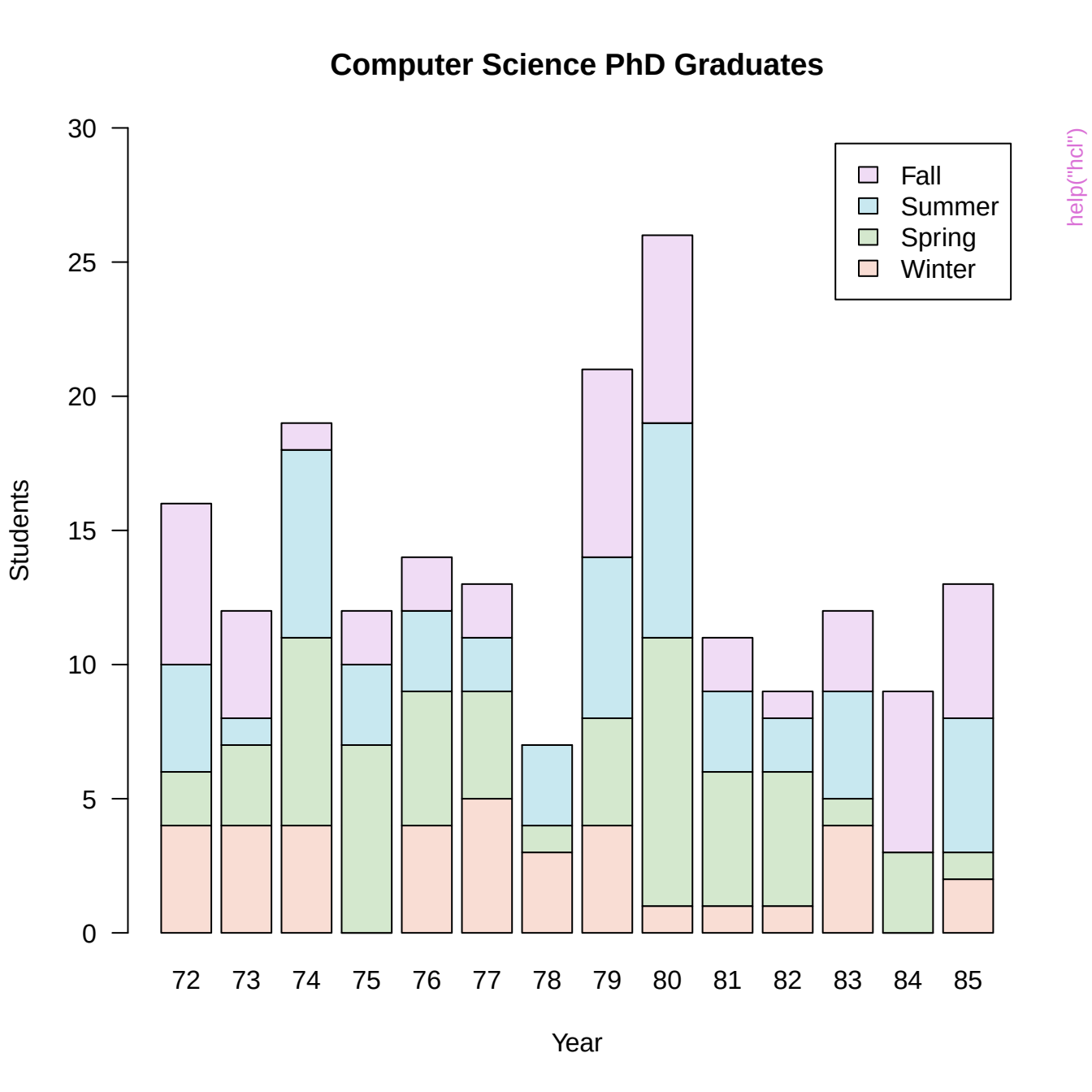
help("gray.colors")

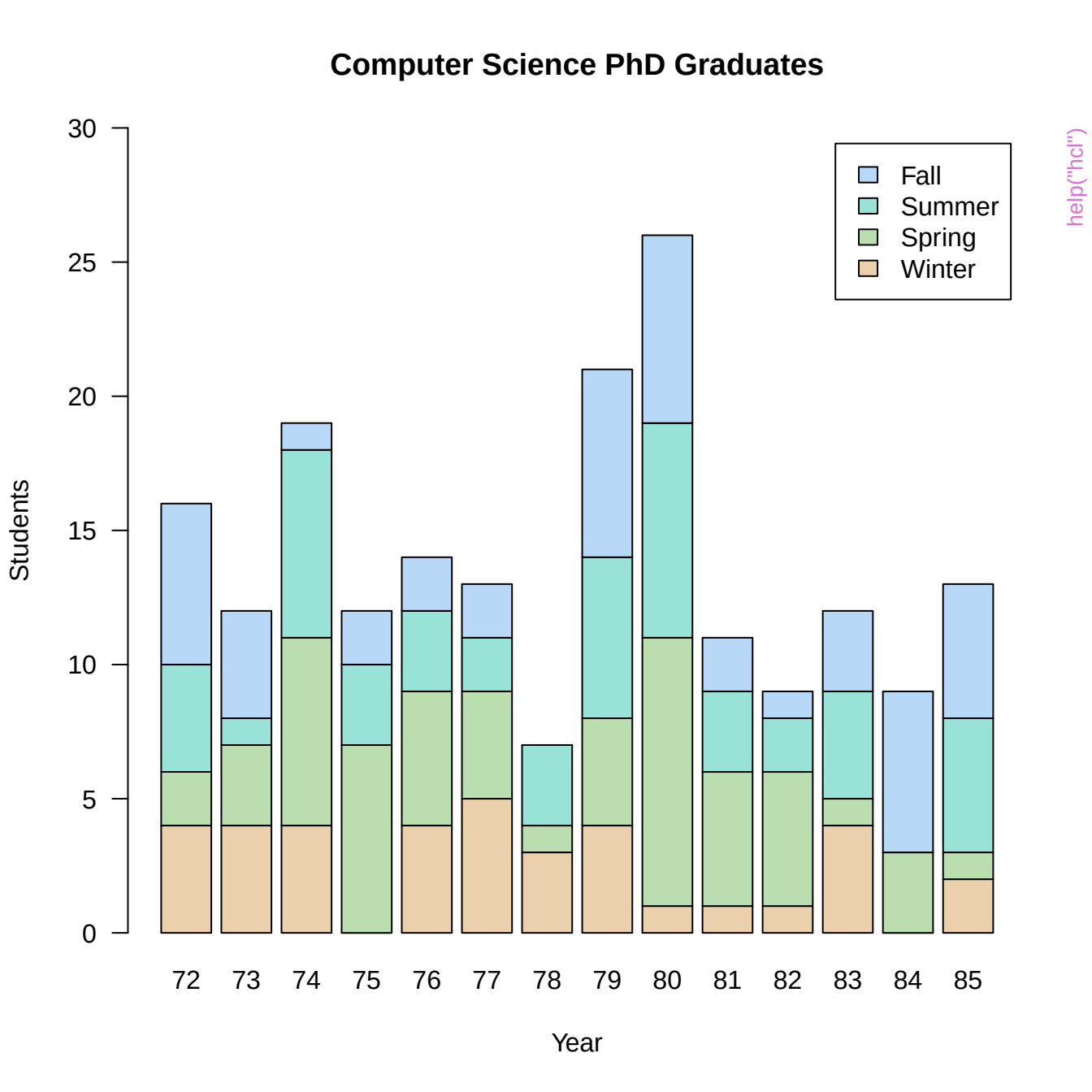


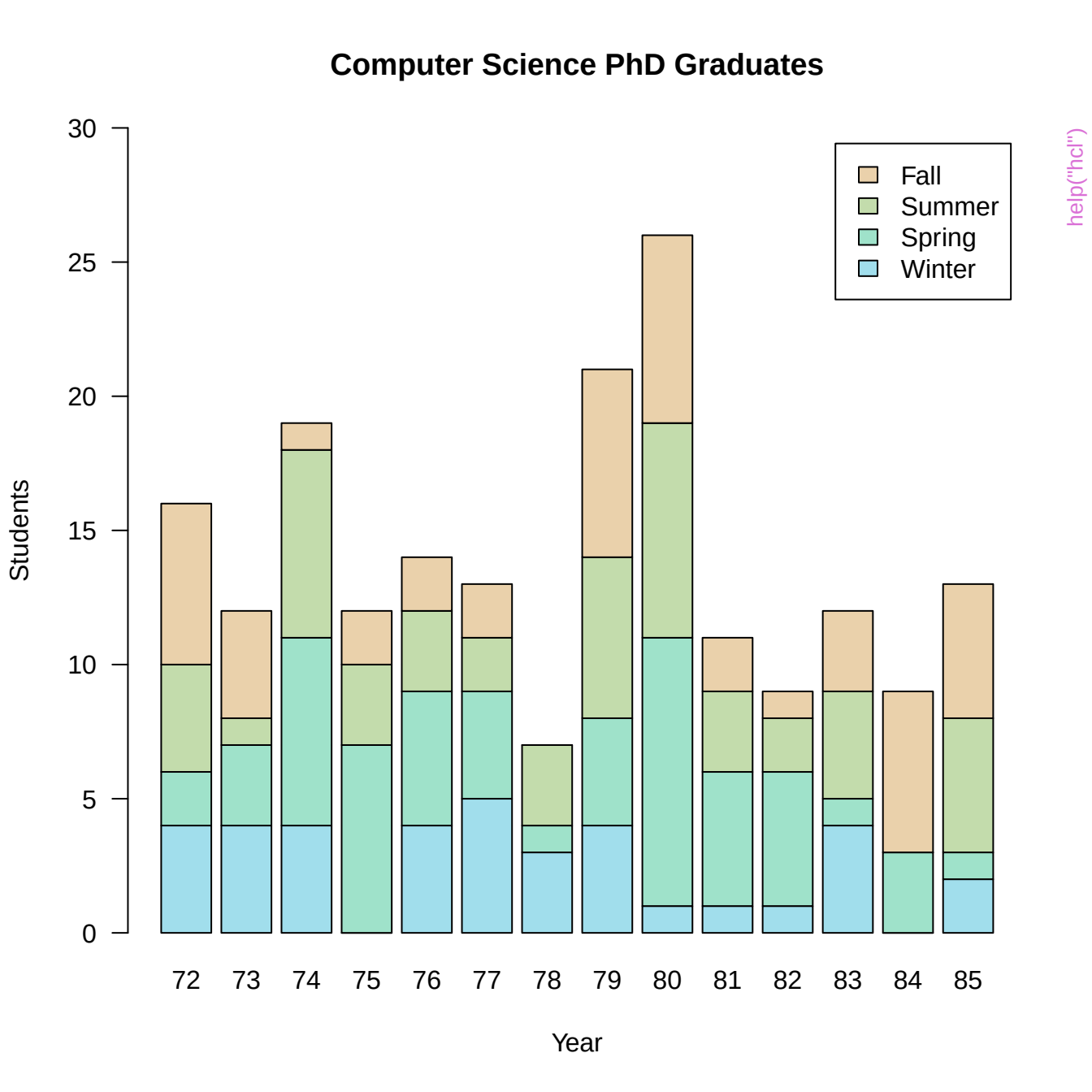
help("gray.colors")

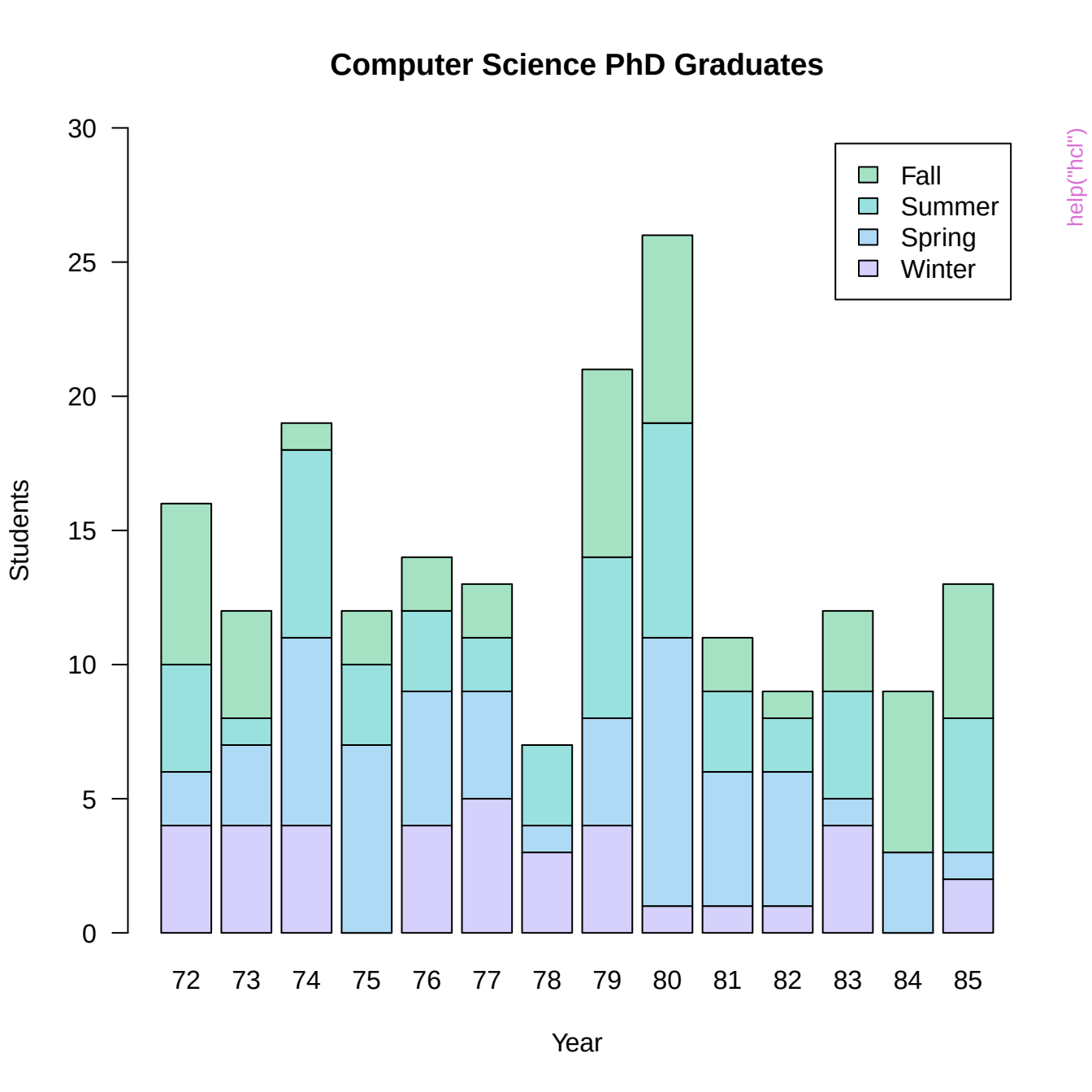

Computer Science PhD Graduates
Students
Year
Fall
Summer
Spring
Winter
0
5
10
15
20
25
30
72
73
74
75
76
77
78
79
80
81
82
83
84
85
help("hcl")

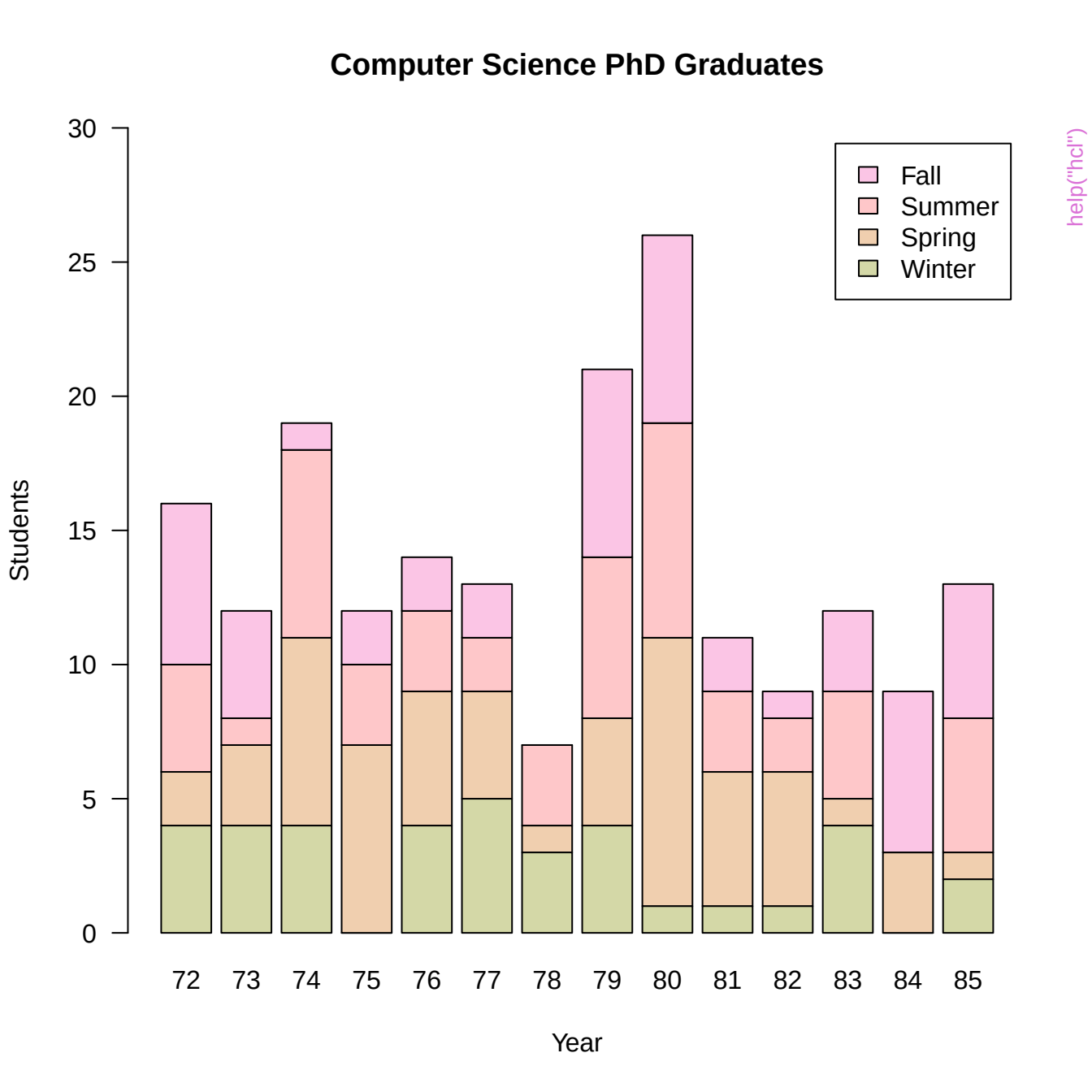

Computer Science PhD Graduates
Students
Year
Fall
Summer
Spring
Winter
0
5
10
15
20
25
30
72
73
74
75
76
77
78
79
80
81
82
83
84
85
help("hcl")

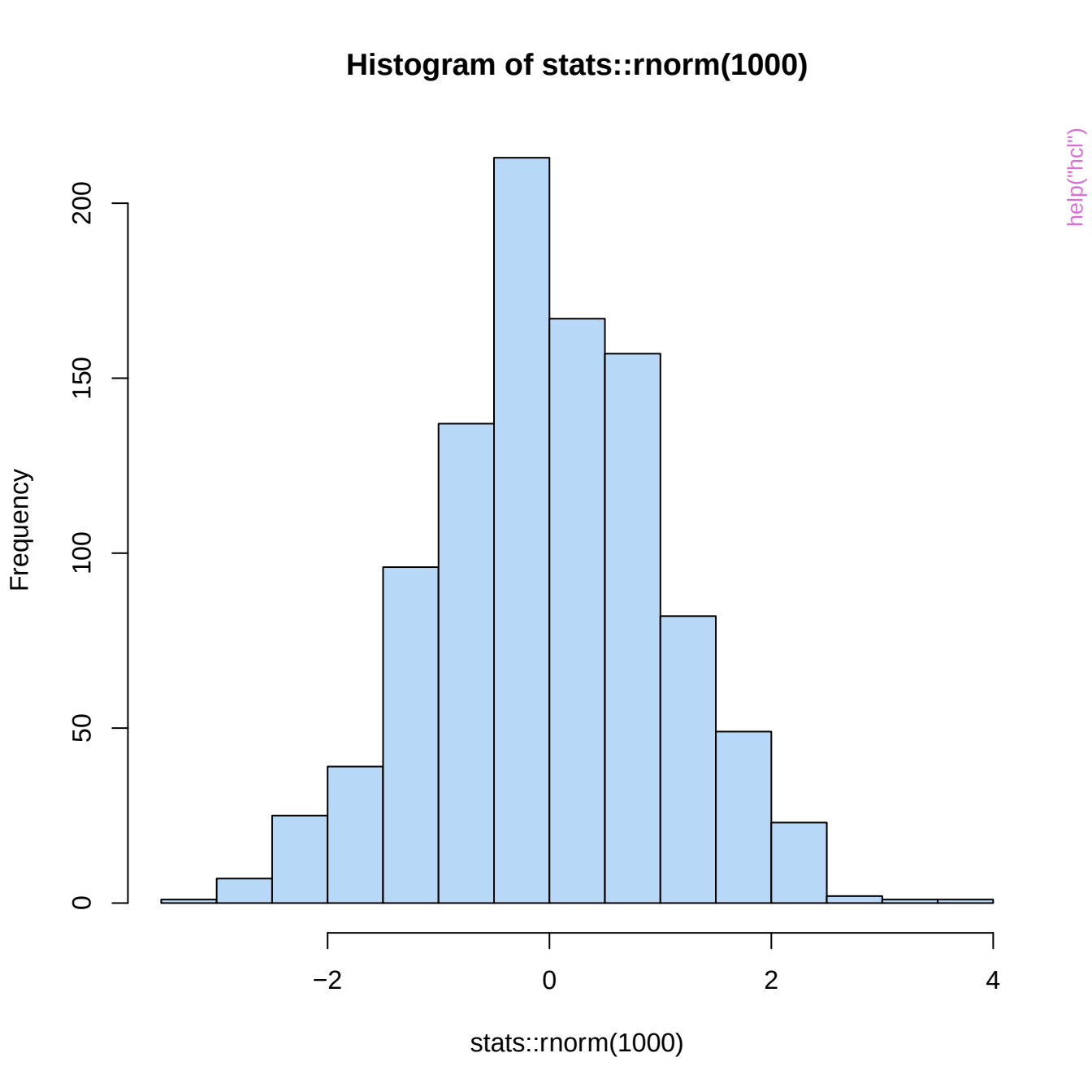

Computer Science PhD Graduates
Students
Year
Fall
Summer
Spring
Winter
0
5
10
15
20
25
30
72
73
74
75
76
77
78
79
80
81
82
83
84
85
help("hcl")

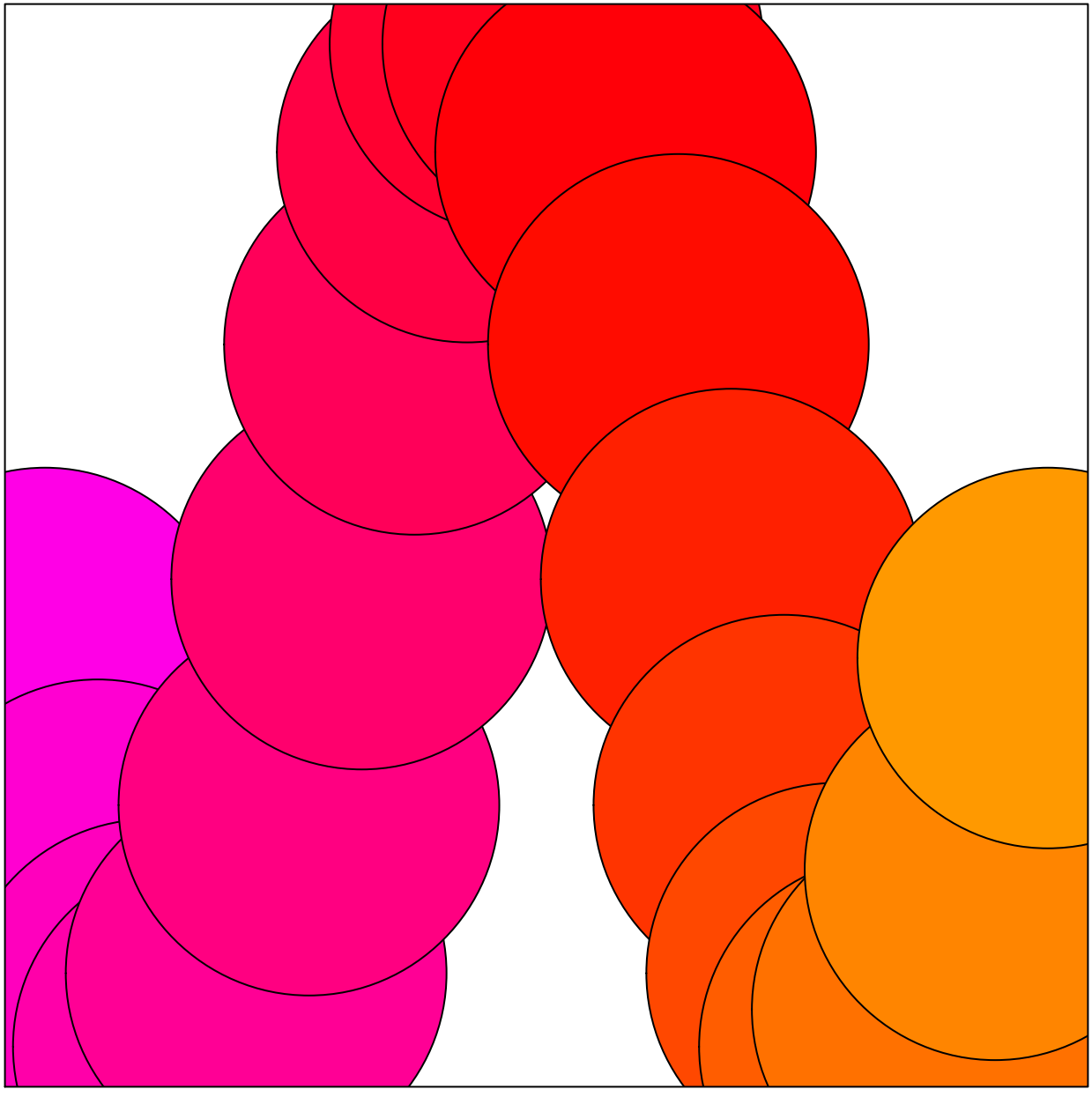

Computer Science PhD Graduates
Students
Year
Fall
Summer
Spring
Winter
0
5
10
15
20
25
30
72
73
74
75
76
77
78
79
80
81
82
83
84
85
help("hcl")


Computer Science PhD Graduates
Students
Year
Fall
Summer
Spring
Winter
0
5
10
15
20
25
30
72
73
74
75
76
77
78
79
80
81
82
83
84
85
help("hcl")

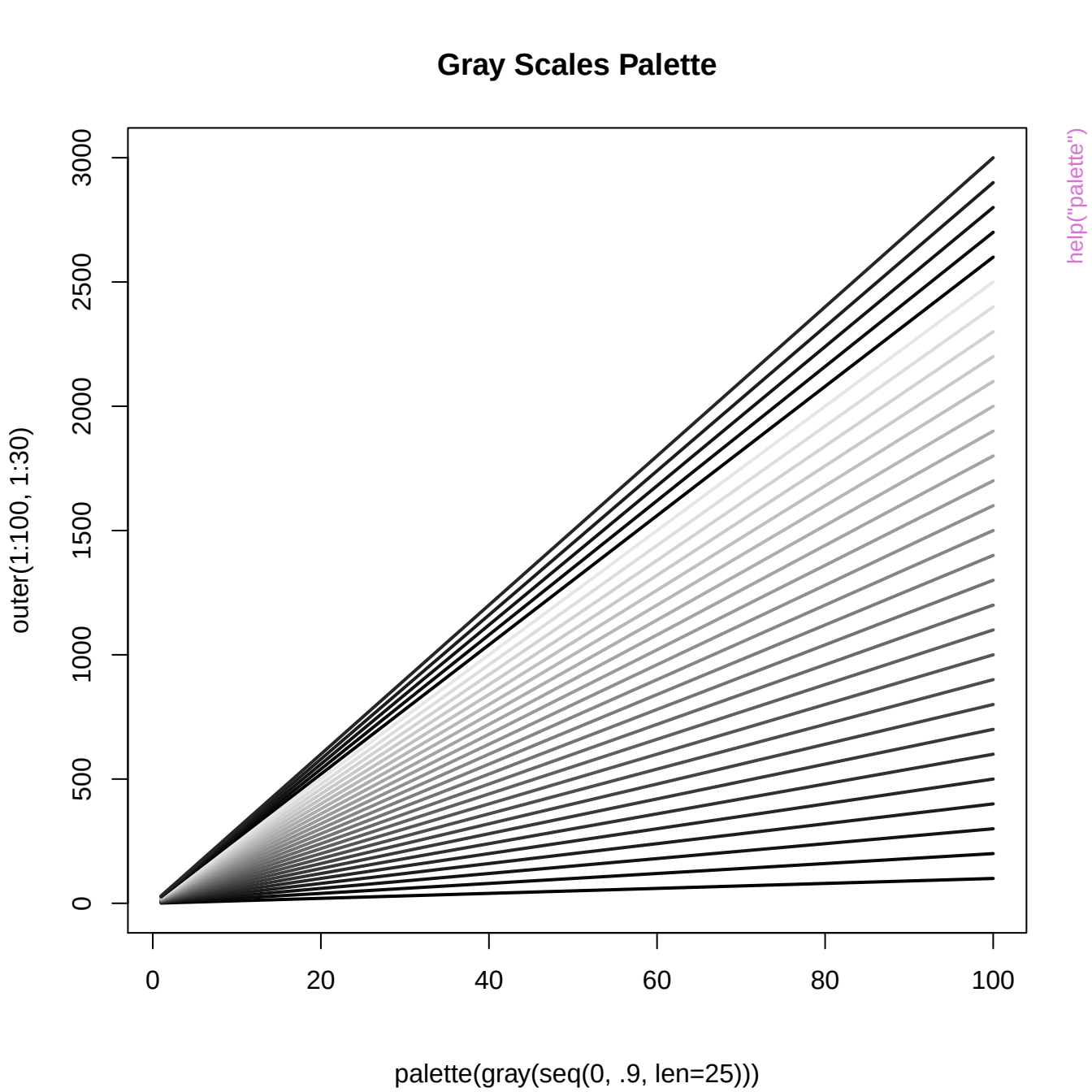

Computer Science PhD Graduates
Students
Year
Fall
Summer
Spring
Winter
0
5
10
15
20
25
30
72
73
74
75
76
77
78
79
80
81
82
83
84
85
help("hcl")

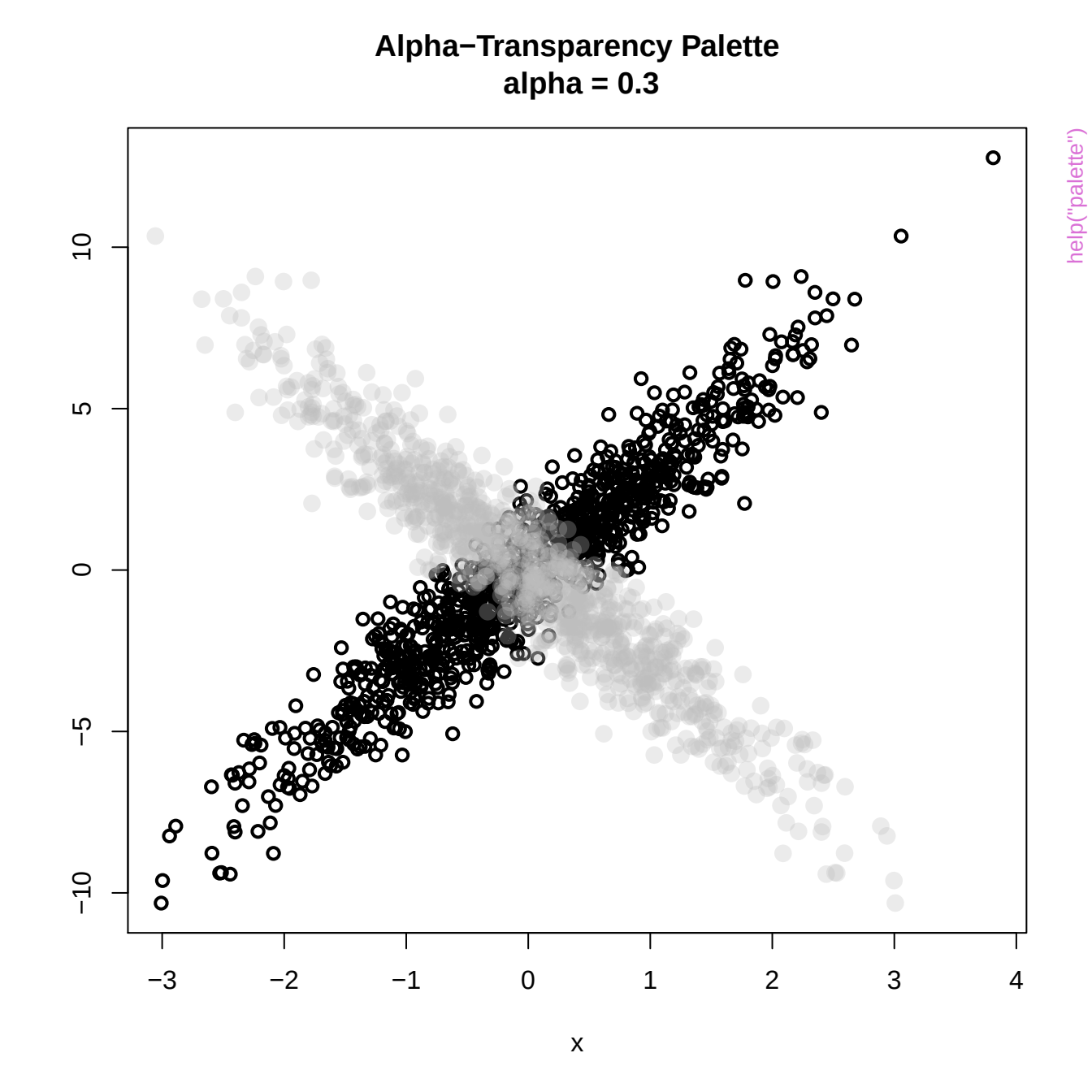

Computer Science PhD Graduates
Students
Year
Fall
Summer
Spring
Winter
0
5
10
15
20
25
30
72
73
74
75
76
77
78
79
80
81
82
83
84
85
help("hcl")

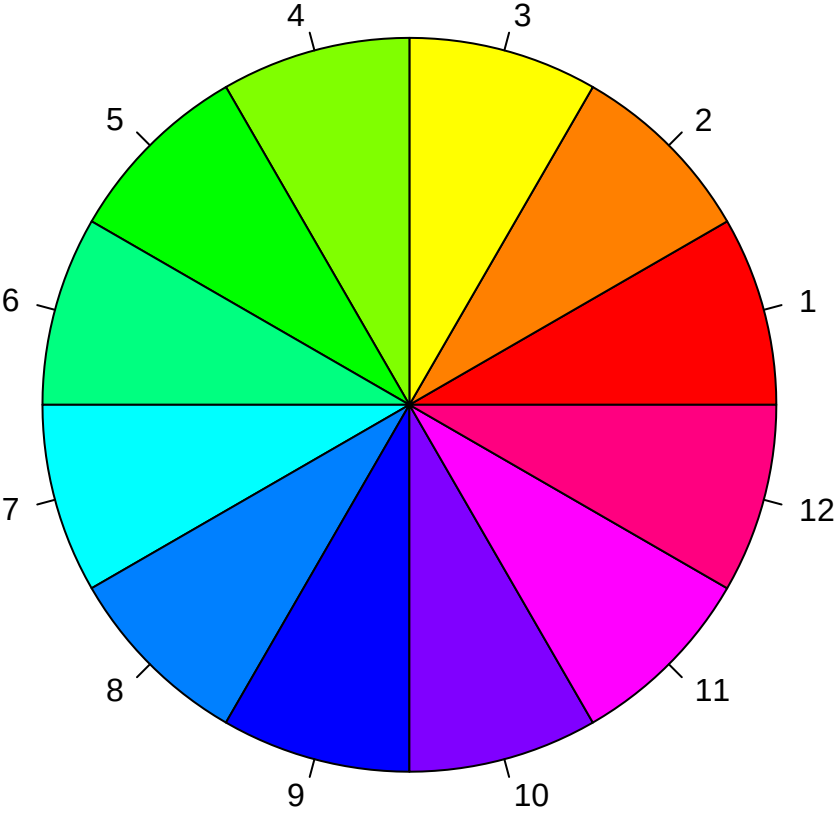

Histogram of stats::rnorm(1000)
Frequency
0
50
100
150
200
−2
0
2
4
stats::rnorm(1000)
help("hcl")


Red tones
help("hsv")

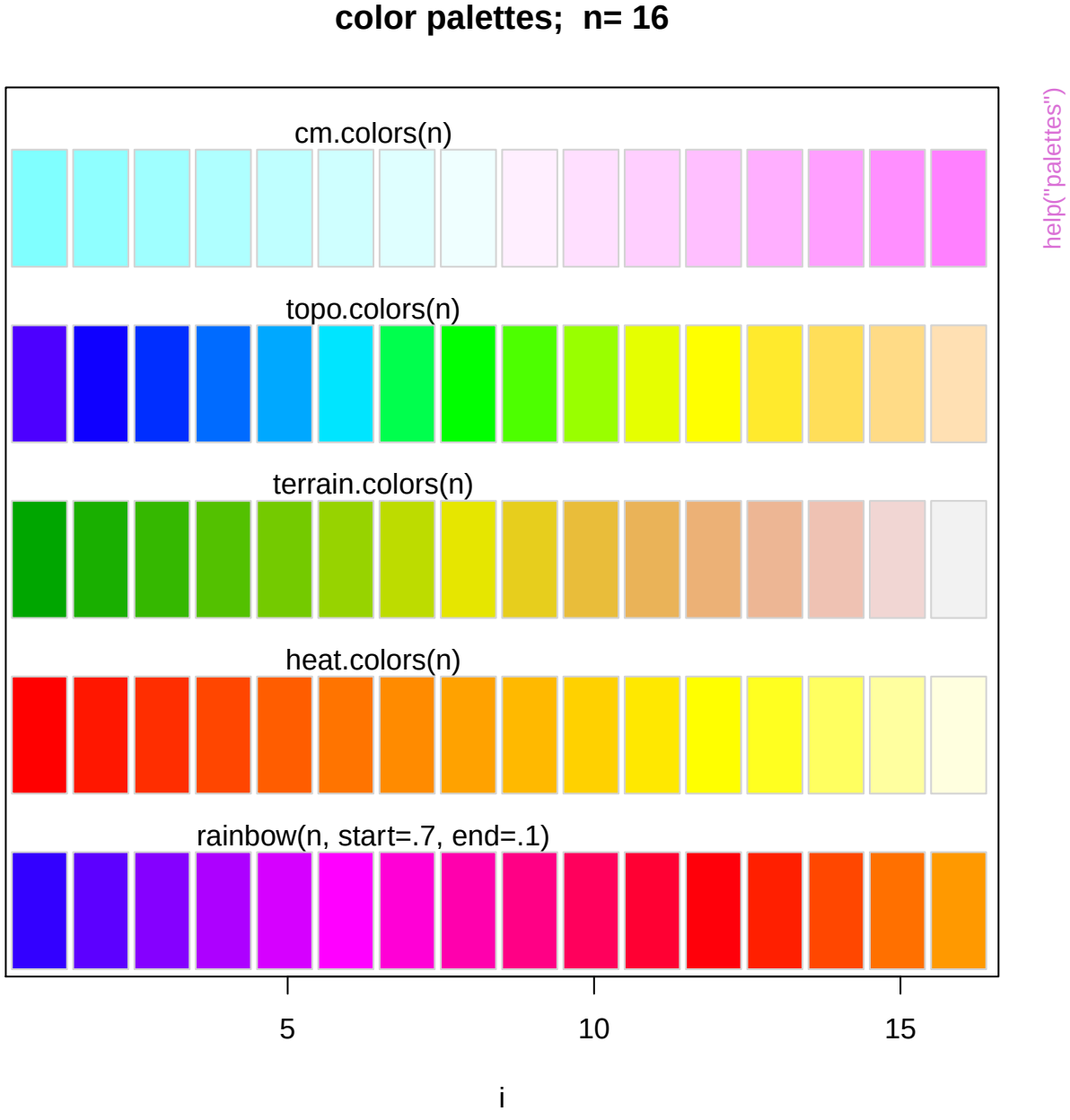
help("n2mfrow")

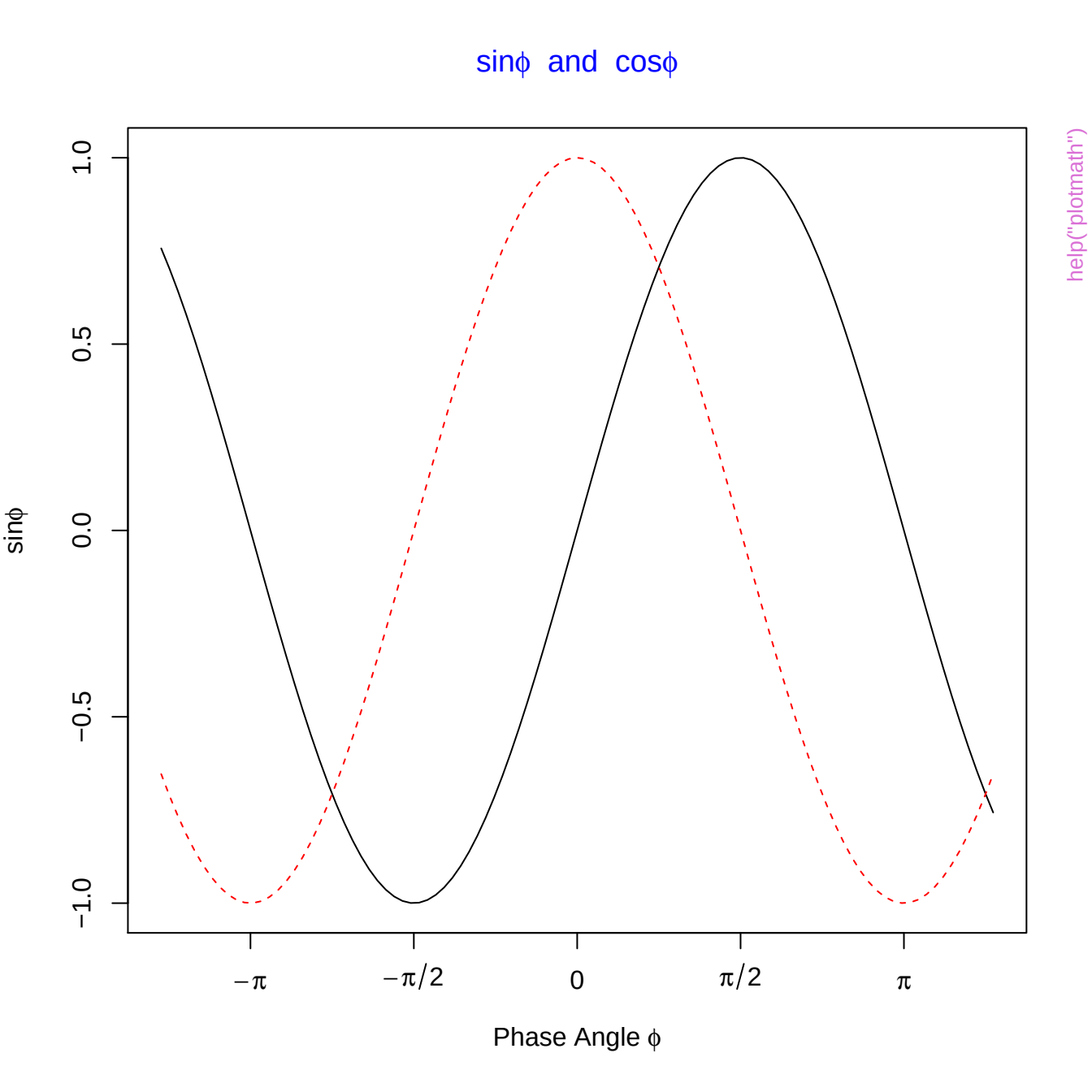

Gray Scales Palette
outer(1:100, 1:30)
0
500
1000
1500
2000
2500
3000
0
20
40
60
80
100
palette(gray(seq(0, .9, len=25)))
help("palette")

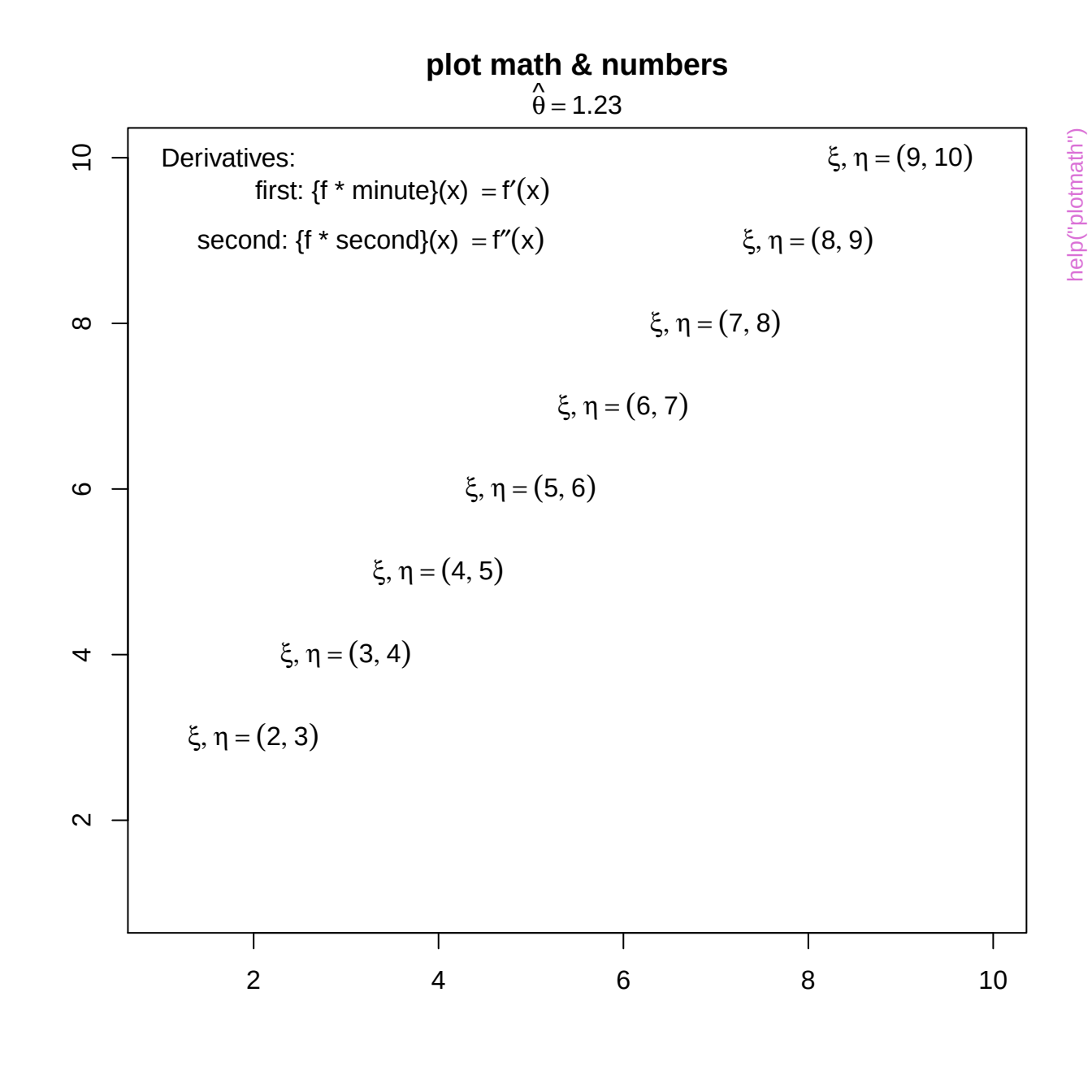

Alpha−Transparency Palette
alpha = 0.3
help("palette")
10
5
0
−5
−10
−3
−2
−1
0
1
2
3
4
x

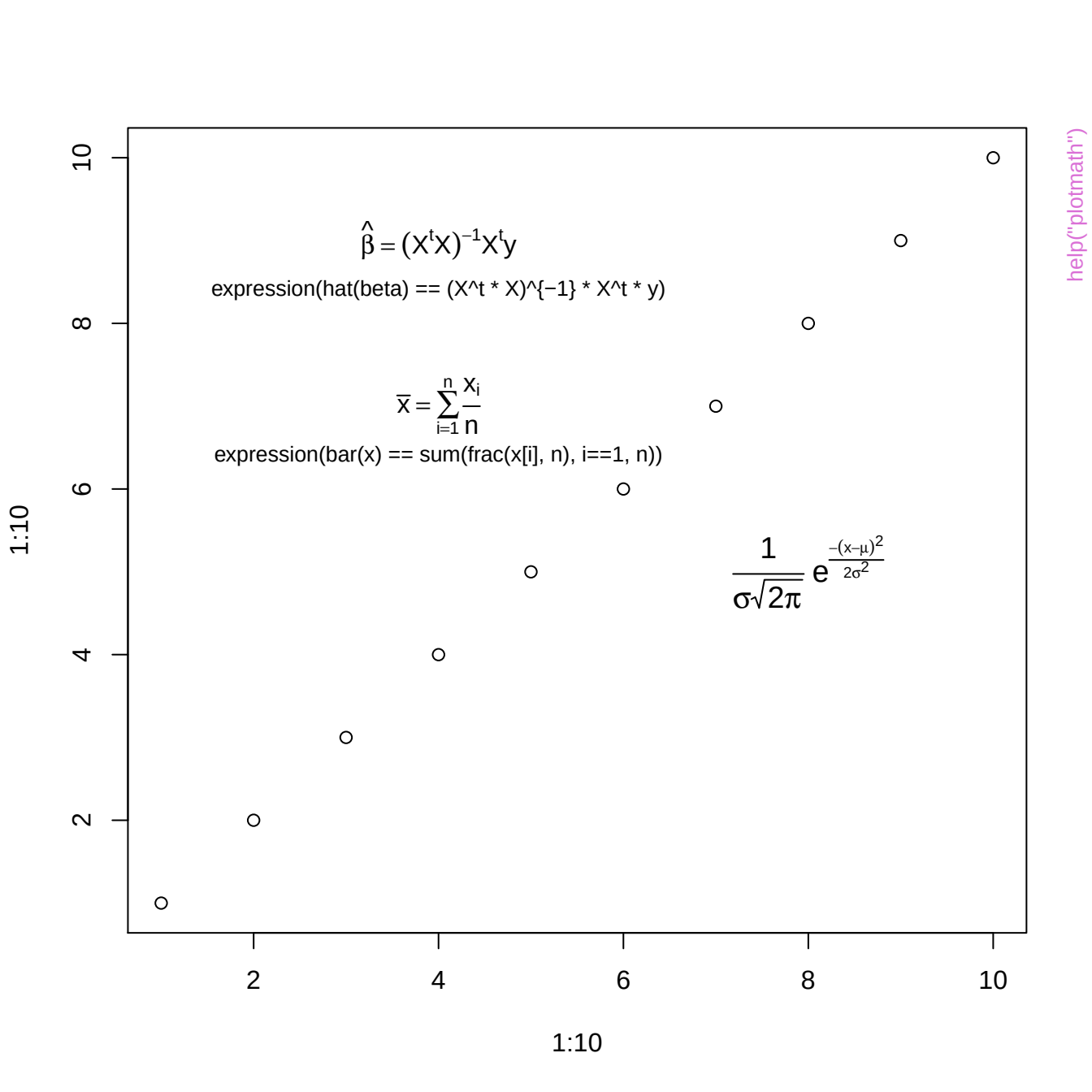


help("palettes")


color palettes; n= 16
cm.colors(n)
topo.colors(n)
terrain.colors(n)
heat.colors(n)
rainbow(n, start=.7, end=.1)
5
10
15
i
help("palettes")


sinϕ and cosϕ
help("plotmath")
1.0
0.5
0.0
−0.5
−1.0
sinϕ
−π
−π/2
0
π/2
π
Phase Angle ϕ


plot math & numbers
$\hat{\theta} = 1.23$
Derivatives:
first: {f * minute}(x) = f′(x)
second: {f * second}(x) = f″(x)
$\xi, \eta = (9, 10)$
$\xi, \eta = (8, 9)$
$\xi, \eta = (7, 8)$
$\xi, \eta = (6, 7)$
$\xi, \eta = (5, 6)$
$\xi, \eta = (4, 5)$
$\xi, \eta = (3, 4)$
$\xi, \eta = (2, 3)$
2
4
6
8
10
help("plotmath")


help("plotmath")
$\hat{\beta} = (X^t X)^{-1} X^t y$
expression(hat(beta) == (X^t * X)^{−1} * X^t * y)
$\bar{x} = \sum_{i=1}^{n} \frac{x_i}{n}$
expression(bar(x) == sum(frac(x[i], n), i==1, n))
$\frac{1}{\sigma\sqrt{2\pi}} e^{\frac{-(x-\mu)^2}{2\sigma^2}}$
1:10
1:10
2
4
6
8
10
2
4
6
8
10

universal	\042	∀
existential	\044	∃
suchthat	\047	∍
therefore	\134	∴
perpendicular	\136	⊥
circlemultiply	\304	⊗
circleplus	\305	⊕
emptyset	\306	∅
angle	\320	∠
leftangle	\341	⟨
rightangle	\361	⟩

1:10
Index
2
4
6
8
10
help("recordGraphics")