R version 4.1.0 (2021-05-18) -- "Camp Pontanezen"

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Platform: x86\_64-w64-mingw32/x64 (64-bit)

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[Workspace loaded from ~/.RData]

> library(ggplot2)

> #### Calculater

> #Arithmetic

> 2\*10

[1] 20

> ## [1] 3

> #Order of operations is preserved

> 1+5\*10

[1] 51

> ## [1] 51

> (1+5)\*10

[1] 60

> 2^5

[1] 32

> 9^(1/2)

[1] 3

> c(1,4,6,7)

[1] 1 4 6 7

> c(1:5,10)

[1] 1 2 3 4 5 10

> seq(1,10,by=2)

[1] 1 3 5 7 9

> seq(0,50,length=11)

[1] 0 5 10 15 20 25 30 35 40 45 50

> seq(1,50,length=11)

[1] 1.0 5.9 10.8 15.7 20.6 25.5 30.4 35.3 40.2 45.1 50.0

> 1:10

[1] 1 2 3 4 5 6 7 8 9 10

> 5:1

[1] 5 4 3 2 1

> seq(0,100\*pi,by=pi)

[1] 0.000000 3.141593 6.283185 9.424778 12.566371 15.707963

[7] 18.849556 21.991149 25.132741 28.274334 31.415927 34.557519

[13] 37.699112 40.840704 43.982297 47.123890 50.265482 53.407075

[19] 56.548668 59.690260 62.831853 65.973446 69.115038 72.256631

[25] 75.398224 78.539816 81.681409 84.823002 87.964594 91.106187

[31] 94.247780 97.389372 100.530965 103.672558 106.814150 109.955743

[37] 113.097336 116.238928 119.380521 122.522113 125.663706 128.805299

[43] 131.946891 135.088484 138.230077 141.371669 144.513262 147.654855

[49] 150.796447 153.938040 157.079633 160.221225 163.362818 166.504411

[55] 169.646003 172.787596 175.929189 179.070781 182.212374 185.353967

[61] 188.495559 191.637152 194.778745 197.920337 201.061930 204.203522

[67] 207.345115 210.486708 213.628300 216.769893 219.911486 223.053078

[73] 226.194671 229.336264 232.477856 235.619449 238.761042 241.902634

[79] 245.044227 248.185820 251.327412 254.469005 257.610598 260.752190

[85] 263.893783 267.035376 270.176968 273.318561 276.460154 279.601746

[91] 282.743339 285.884931 289.026524 292.168117 295.309709 298.451302

[97] 301.592895 304.734487 307.876080 311.017673 314.159265

>

>

> a<- 1:5

> a <- 1:5

> a

[1] 1 2 3 4 5

> b<- seq(15,3,length=5)

> b

[1] 15 12 9 6 3

> c<- a\*b

> c

[1] 15 24 27 24 15

>

> a

[1] 1 2 3 4 5

> sum(a)

[1] 15

> prod(a)

[1] 120

> mean(a)

[1] 3

> sd(a)

[1] 1.581139

> var(a)

[1] 2.5

> min(a)

[1] 1

> media(a)

Error in media(a) : could not find function "media"

> median(a)

[1] 3

> max(a)

[1] 5

> range(a)

[1] 1 5

> a<-seq(0,100,by=10)

> a

[1] 0 10 20 30 40 50 60 70 80 90 100

> a<- seq(0,100,by=10)

> a

[1] 0 10 20 30 40 50 60 70 80 90 100

> a[]

[1] 0 10 20 30 40 50 60 70 80 90 100

> a[5]

[1] 40

> a[c(2,4,6,8)]

[1] 10 30 50 70

> a[0]

numeric(0)

> a[-c(2,4,6,8)]

[1] 0 20 40 60 80 90 100

> a[c(1,1,1,6,6,9)]

[1] 0 0 0 50 50 80

> a[c(1,2)] <- c(333,555)

> a

[1] 333 555 20 30 40 50 60 70 80 90 100

> (a>50)

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

> which(a>50)

[1] 1 2 7 8 9 10 11

> a[{a>50}]

[1] 333 555 60 70 80 90 100

> a[(a>50)]

[1] 333 555 60 70 80 90 100

> !(a>50)

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

> a[!(a>50)]

[1] 20 30 40 50

> a

[1] 333 555 20 30 40 50 60 70 80 90 100

> a[a==50]

[1] 50

> a[(a==55)]

numeric(0)

> a[(a!=50)]

[1] 333 555 20 30 40 60 70 80 90 100

> a[(a>50)]

[1] 333 555 60 70 80 90 100

> a[(a<50)]

[1] 20 30 40

> a[(a<=50)]

[1] 20 30 40 50

> (c(10,14,40,60,99)%in%a)

[1] FALSE FALSE TRUE TRUE FALSE

> a

[1] 333 555 20 30 40 50 60 70 80 90 100

> a[(a>=50)&(a<=90)]

[1] 50 60 70 80 90

> a[(a<50)|(a>100)]

[1] 333 555 20 30 40

> a[(a<50)|!(a>100)]

[1] 20 30 40 50 60 70 80 90 100

> a[(a>=50)&!(a<=90)]

[1] 333 555 100

>

>

> NA+8

[1] NA

> 3\*NA

[1] NA

> mean(c(1,2,NA))

[1] NA

> mean(c(NA,1,2),na.rm=TRUE)

[1] 1.5

> sum(c(NA,1,2),na.rm = TRUE)

[1] 3

> sum(c(NA,1,2))

[1] NA

> sum(c(NA,1,2),na.rm = TRUE)

[1] 3

> a<-c(NA,1.5,NA)

> a

[1] NA 1.5 NA

> a<-c(NA,1:5,NA)

> a

[1] NA 1 2 3 4 5 NA

> is.na(a)

[1] TRUE FALSE FALSE FALSE FALSE FALSE TRUE

> !is.na(a)

[1] FALSE TRUE TRUE TRUE TRUE TRUE FALSE

> a[!is.na(a)]

[1] 1 2 3 4 5

> a

[1] NA 1 2 3 4 5 NA

> a<-a[!is.na(a)]

> a

[1] 1 2 3 4 5

>

>

> y<- c(5,9,12,30,14,18,32,40)

> mean(y)

[1] 20

> var(y)

[1] 156.2857

> ad(y)

Error in ad(y) : could not find function "ad"

> sd(y)

[1] 12.50143

> sort(Y)

Error in sort(Y) : object 'Y' not found

> sort(y)

[1] 5 9 12 14 18 30 32 40

> median(y)

[1] 16

> fivenum(y)

[1] 5.0 10.5 16.0 31.0 40.0

> summary(y)

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

5.00 11.25 16.00 20.00 30.50 40.00

> fivenum(y)[c(2.4)]

[1] 10.5

> fivenum(y)[4]-fivenum(y)[2]

[1] 20.5

> diff(fivenum(y)[c(2,4)])

[1] 20.5

> y2<- sort(y)[-length(y)]

> y2

[1] 5 9 12 14 18 30 32

> median(y2)

[1] 14

> fivenum(y2)

[1] 5.0 10.5 14.0 24.0 32.0

> diff(fivenum(y2)[c(2,4)])

[1] 13.5

> bb<-c(141,148,132,138,154,142,150,146,155,158,150,140,147,148,144,150,149,145)

> sort(bb)

[1] 132 138 140 141 142 144 145 146 147 148 148 149 150 150 150 154 155 158

> length(bb)

[1] 18

> summary(bb)

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

132.0 142.5 147.5 146.5 150.0 158.0

> fivenum(bb)

[1] 132.0 142.0 147.5 150.0 158.0

> range(bb)

[1] 132 158

> diff(range(bb))

[1] 26

> mean(bb)

[1] 146.5

> sd(bb)

[1] 6.382421

> se<-sd(bb)/sqrt(length(bb))

> se

[1] 1.504351

> par(mfrow=c(3,1))

> stripchart(bb,main="Modern Englishman",xlab="head breadth(mm")

> stripchart(bb,method="stack",cex=2,main="larger points(cex=2),method is stack")

> stripchart(bb,method="jitter",cex=2,frame.plot=FALSE,main="no frame.method isjitter")

>

>

> library(ggplot2)

> hb\_df<-data.frame(bb)

> p<-ggplot(hb\_df,aes(x=bb))

> p<- p +geom\_histogram(binwidth =5)

> p<- p +labs(title="Modern Englishman head breadth")

> print(p)

> hb\_df<-data .frame(bb)

Error: unexpected symbol in "hb\_df<-data .frame"

> p1<-ggplot(hb\_df,aes(=bb))

Error: unexpected '=' in "p1<-ggplot(hb\_df,aes(="

> p1<-p1+geom\_dotplot(=2)

Error: unexpected '=' in "p1<-p1+geom\_dotplot(="

> p1<-p1+labs(title="Modern Englishman head breadth")

Error: object 'p1' not found

> p1<-p1+xlab("head breadth (mm)")

Error: object 'p1' not found

> library(ggplot2)

> hb\_df<-data .frame(bb)

Error: unexpected symbol in "hb\_df<-data .frame"

> p1<-ggplot(hb\_df,aes(=bb))

Error: unexpected '=' in "p1<-ggplot(hb\_df,aes(="

> p1<-p1+geom\_dotplot(=2)

Error: unexpected '=' in "p1<-p1+geom\_dotplot(="

> p1<-p1+labs(title="Modern Englishman head breadth")

Error: object 'p1' not found

> p1<-p1+xlab("head breadth (mm)")

Error: object 'p1' not found

> library(ggplot2)

> hb\_df<-data .frame(bb)

Error: unexpected symbol in "hb\_df<-data .frame"

> p1<-ggplot(hb\_df,aes(x=bb))

> p1<-p1+geom\_dotplot(binwidth=2)

> p1<-p1+labs(title="Modern Englishman head breadth")

> p1<-p1+xlab("head breadth (mm)")

> hb\_df<- data.frame(bb)

> p1<-ggplot(hb\_df,aes(x=bb))

> p1<-p1+geom\_dotplot(binwidth=2)

> p1<-p1+labs(title="Modern Englishman head breadth")

> p1<-p1+xlab("head breadth (mm)")

> hb\_df<- data.frame(bb)

> p1<-ggplot(hb\_df,aes(x=bb))

> p1<-p1+geom\_dotplot(binwidth=2)

> p1<-p1+labs(title="Modern Englishman head breadth")

> p1<-p1+xlab("head breadth (mm)")

>

> p2<- ggplot(hb\_df,aex(x=bb))

Error in aex(x = bb) : could not find function "aex"

> p2<-p2 + geom\_dotplot(binwidth=2,stackdir = "center")

Error: object 'p2' not found

> p2<- p2 + labs(title = "Modern English head breadth,stackdir=center")

Error: object 'p2' not found

> p2<- p2+xlab("head breadth(mm)")

Error: object 'p2' not found

>

> p3<- ggplot(hb\_df,aex(x=bb))

Error in aex(x = bb) : could not find function "aex"

> p3<-p3 + geom\_dotplot(binwidth=2,stackdir = "centerwhole")

Error: object 'p3' not found

> p3<- p3 + labs(title = "Modern English head breadth,stackdir=centerwhole")

Error: object 'p3' not found

> p3<- p3+xlab("head breadth(mm)")

Error: object 'p3' not found

>

> library(gridExtra)

Error in library(gridExtra) : 不存在叫‘gridExtra’这个名字的程辑包

> grid.arrange(p1,p2,p3,ncol=1)

Error in grid.arrange(p1, p2, p3, ncol = 1) :

could not find function "grid.arrange"

> install.packages("gridExtra")

WARNING: Rtools is required to build R packages but is not currently installed. Please download and install the appropriate version of Rtools before proceeding:

https://cran.rstudio.com/bin/windows/Rtools/

将程序包安装入‘C:/Users/CETC/Documents/R/win-library/4.1’

(因为‘lib’没有被指定)

trying URL 'https://cran.rstudio.com/bin/windows/contrib/4.1/gridExtra\_2.3.zip'

Content type 'application/zip' length 1109328 bytes (1.1 MB)

downloaded 1.1 MB

package ‘gridExtra’ successfully unpacked and MD5 sums checked

The downloaded binary packages are in

C:\Users\CETC\AppData\Local\Temp\RtmpMBxVAv\downloaded\_packages

> library(gridExtra)

> grid.arrange(p1,p2,p3,ncol=1)

Error in arrangeGrob(...) : object 'p2' not found

> hb\_df<- data.frame(bb)

> p1<-ggplot(hb\_df,aes(x=bb))

> p1<-p1+geom\_dotplot(binwidth=2)

> p1<-p1+labs(title="Modern Englishman head breadth")

> p1<-p1+xlab("head breadth (mm)")

>

> p2<- ggplot(hb\_df,aex(x=bb))

Error in aex(x = bb) : could not find function "aex"

> p2<-p2 + geom\_dotplot(binwidth=2,stackdir = "center")

Error: object 'p2' not found

> p2<- p2 + labs(title = "Modern English head breadth,stackdir=center")

Error: object 'p2' not found

> p2<- p2+xlab("head breadth(mm)")

Error: object 'p2' not found

>

> p3<- ggplot(hb\_df,aex(x=bb))

Error in aex(x = bb) : could not find function "aex"

> p3<-p3 + geom\_dotplot(binwidth=2,stackdir = "centerwhole")

Error: object 'p3' not found

> p3<- p3 + labs(title = "Modern English head breadth,stackdir=centerwhole")

Error: object 'p3' not found

> p3<- p3+xlab("head breadth(mm)")

Error: object 'p3' not found

>

>

> library(gridExtra)

> grid.arrange(p1,p2,p3,ncol=1)

Error in arrangeGrob(...) : object 'p2' not found

> hb\_df<- data.frame(bb)

> p1<-ggplot(hb\_df,aes(x=bb))

> p1<-p1+geom\_dotplot(binwidth=2)

> p1<-p1+labs(title="Modern Englishman head breadth")

> p1<-p1+xlab("head breadth (mm)")

>

> p2<- ggplot(hb\_df,aes(x=bb))

> p2<-p2 + geom\_dotplot(binwidth=2,stackdir = "center")

> p2<- p2 + labs(title = "Modern English head breadth,stackdir=center")

> p2<- p2+xlab("head breadth(mm)")

>

> p3<- ggplot(hb\_df,aex(x=bb))

Error in aex(x = bb) : could not find function "aex"

> p3<-p3 + geom\_dotplot(binwidth=2,stackdir = "centerwhole")

Error: object 'p3' not found

> p3<- p3 + labs(title = "Modern English head breadth,stackdir=centerwhole")

Error: object 'p3' not found

> p3<- p3+xlab("head breadth(mm)")

Error: object 'p3' not found

>

>

> library(gridExtra)

> grid.arrange(p1,p2,p3,ncol=1)

Error in arrangeGrob(...) : object 'p3' not found

> hb\_df<- data.frame(bb)

> p1<-ggplot(hb\_df,aes(x=bb))

> p1<-p1+geom\_dotplot(binwidth=2)

> p1<-p1+labs(title="Modern Englishman head breadth")

> p1<-p1+xlab("head breadth (mm)")

>

> p2<- ggplot(hb\_df,aes(x=bb))

> p2<-p2 + geom\_dotplot(binwidth=2,stackdir = "center")

> p2<- p2 + labs(title = "Modern English head breadth,stackdir=center")

> p2<- p2+xlab("head breadth(mm)")

>

> p3<- ggplot(hb\_df,aes(x=bb))

> p3<-p3 + geom\_dotplot(binwidth=2,stackdir = "centerwhole")

> p3<- p3 + labs(title = "Modern English head breadth,stackdir=centerwhole")

> p3<- p3+xlab("head breadth(mm)")

>

>

> library(gridExtra)

> grid.arrange(p1,p2,p3,ncol=1)

> library(ggplot2)

Warning message:

In diff.default(xscale) : reached elapsed time limit

> hb\_df<- data.frame(bb)

> p1<-ggplot(hb\_df,aes(x=bb))

> p1<-p1+geom\_dotplot(binwidth=2)

> p1<-p1+labs(title="Modern Englishman head breadth")

> p1<-p1+xlab("head breadth (mm)")

>

> p2<- ggplot(hb\_df,aes(x=bb))

> p2<-p2 + geom\_dotplot(binwidth=2,stackdir = "center")

> p2<- p2 + labs(title = "Modern English head breadth,stackdir=center")

> p2<- p2+xlab("head breadth(mm)")

>

> p3<- ggplot(hb\_df,aes(x=bb))

> p3<-p3 + geom\_dotplot(binwidth=2,stackdir = "centerwhole")

> p3<- p3 + labs(title = "Modern English head breadth,stackdir=centerwhole")

> p3<- p3+xlab("head breadth(mm)")

>

>

> library(gridExtra)

> grid.arrange(p1,p2,p3,ncol=1)

> par(mfrow=c(1,3))

Warning message:

In grid.Call(C\_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :

reached elapsed time limit

> hist(bb,main="Modern Englishman",xlab="head breadth(mm)")

> hist(bb,breaks=15,main="Histogram,15 breaks")

> hist(bb,breaks=8,freq=FALSE,main="Histogram,density")

> library(ggplot2)

> hb\_df<-data.frame(bb)

> p<-ggplot(hb\_df,aes(x=bb))

> p<- p +geom\_histogram(binwidth =5)

> p<- p +labs(title="Modern Englishman head breadth")

> print(p)

> stem(bb)

The decimal point is 1 digit(s) to the right of the |

13 | 28

14 | 0124567889

15 | 000458

> stem(bb,scale = 2)

The decimal point is 1 digit(s) to the right of the |

13 | 2

13 | 8

14 | 0124

14 | 567889

15 | 0004

15 | 58

> stem(bb,scale = 5)

The decimal point is at the |

132 | 0

134 |

136 |

138 | 0

140 | 00

142 | 0

144 | 00

146 | 00

148 | 000

150 | 000

152 |

154 | 00

156 |

158 | 0

> fivenum(bb)

[1] 132.0 142.0 147.5 150.0 158.0

> par(mfrow=c(1,1))

> boxplot(bb,horizontal = TRUE,main="Modern English",xlab="head breadth(mm)")

> library(ggplot2)

> hb\_df<- data.frame(bb)

> library(ggplot2)

> hb\_df<- data.frame(bb)

> p<- ggplot(hb\_df,aes(x="bb",y=bb))

> p<- p + geom\_boxplot()

> p<- p + coord\_flip()

> p<- p + labs(title = "Modern Englishman head breadth")

> print(p)

> fivenum(bb)

[1] 132.0 142.0 147.5 150.0 158.0

> par(mfrow=c(1,1))

> boxplot(bb,horizontal = TRUE,main="Modern English",xlab="head breadth(mm)")

>

> library(ggplot2)

> hb\_df<- data.frame(bb)

> p<- ggplot(hb\_df,aes(x="bb",y=bb))

> p<- p + geom\_boxplot()

> p<- p + coord\_flip()

> p<- p + labs(title = "Modern Englishman head breadth")

> print(p)

> library(ggplot2)

> hb\_df<- data.frame(bb)

> p<- ggplot(hb\_df,aes(x="bb",y=bb))

> p<- p + geom\_boxplot()

> p<- p + coord\_flip()

> p<- p + labs(title = "Modern Englishman head breadth")

> print(p)

> par(mfrow=c(3,1))

> hist(bb,freq = FLASE,main = "Histogram with kernel density plot,Modern Englishman")

Error in hist.default(bb, freq = FLASE, main = "Histogram with kernel density plot,Modern Englishman") :

object 'FLASE' not found

> hist(bb,freq = FALSE,main = "Histogram with kernel density plot,Modern Englishman")

> points(density(bb),type = "1")

Error in plot.xy(xy.coords(x, y), type = type, ...) :

invalid plot type '1'

> points(density(bb),type = "1")

Error in plot.xy(xy.coords(x, y), type = type, ...) :

invalid plot type '1'

> rug(bb)

> hist(bb,freq = FALSE,main = "Histogram with kernel density plot,Modern Englishman")

> points(density(bb),type = "1")

Error in plot.xy(xy.coords(x, y), type = type, ...) :

invalid plot type '1'

> library(vioplot)

Error in library(vioplot) : 不存在叫‘vioplot’这个名字的程辑包

> install.packages(vioplot)

Error in install.packages : object 'vioplot' not found

> install.packages(vioplot)

Error in install.packages : object 'vioplot' not found

> vioplot(bb,horizontal=TRUE,col="gray")

Error in vioplot(bb, horizontal = TRUE, col = "gray") :

could not find function "vioplot"

> title("Violin plot ,Modern Englishman")

> boxplot(bb,horizontal = TRUE,main="Boxplot,Modern Englishman",xlab="head breadth")

> income<- c(7,1110,7,5,8,12,0,5,2,2,46,7)

> income<-sort(income,decreasing=TRUE)

> income

[1] 1110 46 12 8 7 7 7 5 5 2 2 0

> summary

function (object, ...)

UseMethod("summary")

<bytecode: 0x0000000019b2c368>

<environment: namespace:base>

> summary(income)

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

0.00 4.25 7.00 100.92 9.00 1110.00

> stem(income)

The decimal point is 3 digit(s) to the right of the |

0 | 00000000000

0 |

1 | 1

> income2<- income[-c(1,2)]

> income2

[1] 12 8 7 7 7 5 5 2 2 0

> summary(income2)

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

0.00 2.75 6.00 5.50 7.00 12.00

>

>

>

> stem(income2)

The decimal point is 1 digit(s) to the right of the |

0 | 022

0 | 557778

1 | 2

> stem(income2,scale = 2)

The decimal point is at the |

0 | 0

2 | 00

4 | 00

6 | 000

8 | 0

10 |

12 | 0

> par(mfrow=c(1,3))

> par(mfrow=c(1,3))

> boxplot(income,main = "Income")

> boxplot(income[-1],main="(remove largest)")

> boxplot(income2,main = "(remove 2 largest)")

> source("D:/DeepLearn/course/102/1/aa.R")

Error in media(a) : could not find function "media"

> x1<- rnorm(250,mean = 100,sd=15)

> par(mfrow=c(3,1))

> hist(x1,freq = FALSE,breaks = 20)

> points(density(x1),type = "1")

Error in plot.xy(xy.coords(x, y), type = type, ...) :

invalid plot type '1'

> rug(x1)

> library(vioplot)

载入需要的程辑包：sm

Package 'sm', version 2.2-5.6: type help(sm) for summary information

载入需要的程辑包：zoo

载入程辑包：‘zoo’

The following objects are masked from ‘package:base’:

as.Date, as.Date.numeric

> vioplot(x1,horizontal=TRUE,col="gray")

> boxplot(x1,horizontal=TRUE)

> x1\_df<-data.frame(x1)

> p1 <- ggplot(x1\_df, aes(x =x1))

> p1 <-p1+geom\_histogram(aes (y=..density..),binwidth=5,colour="black", fill="white")

> p1<-p1+geom\_density(alpha=0.1,fill="#FF6666")

> p1 <-p1+geom\_point(aes (y=-0.001),position=position\_jitter(heigh=0.0005),alpha=1/5)

> p2<-ggplot(x1\_df, aes(x="x1",y=x1))

> p2<-p2+ geom\_violin(fill ="gray50")

> p2<- p2+geom\_boxplot(width = 0.2, alpha=3/4)

> p2<- p2+ coord\_flip()

> P3<- ggplot(x1\_df, aes(x="x1",y=x1))

> p3<-p3+ geom\_boxplot()

> p3<-p3+coord\_flip()

> library(gridExtra)

> grid.arrange(p1, p2, p3, ncol=1)

> library(vioplot)

> vioplot(x1,horizontal=TRUE,col="gray")

> boxplot(x1,horizontal=TRUE)

> x1\_df<-data.frame(x1)

> p1 <- ggplot(x1\_df, aes(x =x1))

> p1 <-p1+geom\_histogram(aes (y=..density..),binwidth=5,colour="black", fill="white")

> p1<-p1+geom\_density(alpha=0.1,fill="#FF6666")

> p1 <-p1+geom\_point(aes (y=-0.001),position=position\_jitter(heigh=0.0005),alpha=1/5)

> p2<-ggplot(x1\_df, aes(x="x1",y=x1))

> p2<-p2+ geom\_violin(fill ="gray50")

> p2<- p2+geom\_boxplot(width = 0.2, alpha=3/4)

> p2<- p2+ coord\_flip()

> P3<- ggplot(x1\_df, aes(x="x1",y=x1))

> p3<-p3+ geom\_boxplot()

> p3<-p3+coord\_flip()

Coordinate system already present. Adding new coordinate system, which will replace the existing one.

> library(gridExtra)

> grid.arrange(p1, p2, p3, ncol=1)

> library(moments)

Error in library(moments) : 不存在叫‘moments’这个名字的程辑包

> source("D:/DeepLearn/course/102/1/aa.R")

Error in media(a) : could not find function "media"

> source("D:/DeepLearn/course/102/1/aa.R")

Error in media(a) : could not find function "media"

> library(moments)

> summary(x1)

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

65.94 89.77 99.46 99.92 109.90 147.11

> sd(x1)

[1] 14.1813

> skewness(x1)

[1] 0.1834454

> kurtosis(x1)

[1] 2.897545

> stem(x1)

The decimal point is 1 digit(s) to the right of the |

6 | 689

7 | 0111

7 | 6778899999

8 | 00000122233333444

8 | 55556666677777788888889999

9 | 000000000001111111122222233334444444

9 | 55556666677778888888888899999

10 | 00000011112222233333334444

10 | 555555555566667777777888888899999

11 | 000000111111122222223333444444

11 | 5556666777788999

12 | 0011222334

12 | 56688

13 | 1

13 | 557

14 |

14 | 7

> x2.temp <- rnorm(250, mean =0, sd=1)

> x2<-sign(x2.temp)\*x2.temp-2\*15+100

> par(mfrow=c(3,1))

> hist(x2,freq=FALSE,breaks=20)

> points(density(x2),type="l")

> rug(x2)

> library(vioplot)

> vioplot(x2,horizontal=TRUE,col="gray")

> boxplot(x2,horizontal=TRUE)

> x2\_df<-data.frame(x2)

> p1<-ggplot(x2\_df,aes(x=x2))

> p1<-p1+ geom\_histogram(aes (y=..density..),binwidth=5,colour="black", fill="white")

> p1 <-p1+geom\_density(alpha=0.1, fill="#FF6666")

> p1 <- p1+geom\_point(aes(y=-0.001), position=position\_jitter(height =0.0005),alpha=1/5)

> p2<-ggplot(x2\_df, aes(x ="x2", y=x2))

> p2<-p2+geom\_violin(fill ="gray50")

> p2<-p2+geom\_boxplot(width =0.2,alpha =3/4)

> p2<- p2+ coord\_flip()

> p3<- ggplot(x2\_df, aes(x ="x2",y=x2))

> p3<- p3+ geom\_boxplot()

> p3<-p3+ coord\_flip()

> library (gridExtra)

> grid.arrange(p1, p2, p3, ncol=1)

> summary(x2)

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

70.01 70.30 70.68 70.76 71.08 72.97

> sd(x2)

[1] 0.5839161

> skewness(x2)

[1] 1.005496

> kurtosis(x2)

[1] 3.81567

> stem(x2)

The decimal point is 1 digit(s) to the left of the |

700 | 112344455666677800001112223344556667788999999

702 | 011122235556667890000112222334455667888

704 | 0012344567778888991122456667888

706 | 23455567778999900001111234567789

708 | 02356666677889900113344578

710 | 000223345567778222346667889

712 | 001134472368

714 | 01236671123467

716 | 1245015666

718 | 56345

720 | 7

722 | 37047

724 | 4

726 | 1

728 | 7

> library(vioplot)

> vioplot(x2,horizontal=TRUE,col="gray")

> boxplot(x2,horizontal=TRUE)

> x2\_df<-data.frame(x2)

> p1<-ggplot(x2\_df,aes(x=x2))

> p1<-p1+ geom\_histogram(aes (y=..density..),binwidth=5,colour="black", fill="white")

> p1 <-p1+geom\_density(alpha=0.1, fill="#FF6666")

> p1 <- p1+geom\_point(aes(y=-0.001), position=position\_jitter(height =0.0005),alpha=1/5)

> p2<-ggplot(x2\_df, aes(x ="x2", y=x2))

> p2<-p2+geom\_violin(fill ="gray50")

> p2<-p2+geom\_boxplot(width =0.2,alpha =3/4)

> p2<- p2+ coord\_flip()

> p3<- ggplot(x2\_df, aes(x ="x2",y=x2))

> p3<- p3+ geom\_boxplot()

> p3<-p3+ coord\_flip()

> library (gridExtra)

> grid.arrange(p1, p2, p3, ncol=1)

> x3<- runif(250,min=50,max=150)

> par(mfrow=c(3,1))

> hist(x3,freq=FALSE,breaks=20)

> points(density(x3),type="l")

> rug(x3)

> library(vioplot)

> vioplot(x3,horizontal=TRUE,col="gray")

> boxplot(x3,horizontal=TRUE)

> x3\_df<- data.frame(x3)

> p1 <- ggplot(x3\_df, aes(x=x3))

> p1 <- p1+geom\_histogram(aes(y=..density..),binwidth=5,colour="black", fill="white")

> P1 <- p1+geom\_density(alpha=0.1, fill="#FF6666")

> p1 <-p1+geom\_point (aes(y =-0.001),position=position\_jitter(height = 0.0005),alpha=1/5)

> p2 <- ggplot(x3\_df, aes(x="x3",y= x3))

> p2<-p2+geom\_violin(fill="gray50")

> p2<-p2+ geom\_boxplot(width=0.2, alpha =3/4)

> p2<- p2+ coord\_flip()

> p3<- ggplot(x3\_df, aes(x ="x3",y =x3))

> p3<- p3+ geom\_boxplot()

> p3<- p3+coord\_flip()

> library (gridExtra)

> grid.arrange(p1, p2, p3, ncol=1)

> summary(x3)

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

50.38 77.84 102.62 101.62 127.57 149.16

> sd(x3)

[1] 28.56651

> skewness(x3)

[1] -0.05589847

> kurtosis(x3)

[1] 1.806243

> stem(x3)

The decimal point is 1 digit(s) to the right of the |

5 | 0112233344

5 | 556677788

6 | 0000011233444

6 | 556667788

7 | 00111333444

7 | 56667777888888999999

8 | 002223334

8 | 555667778999

9 | 00111112333334444

9 | 66667889

10 | 0112222333344

10 | 5555666777778999

11 | 011122224

11 | 55578888999

12 | 001111233334444

12 | 5567788889

13 | 000011112223333444

13 | 555667777888899

14 | 0023333444

14 | 555666777788889

> x4<- rexp(250,rate=1)

> par(mfrow = c(3,1))

> hist(x4,freq=FALSE,breaks=20)

> points(swnsity(x4),type="1")

Error in swnsity(x4) : could not find function "swnsity"

> points(density(x4),type="1")

Error in plot.xy(xy.coords(x, y), type = type, ...) :

invalid plot type '1'

> points(density(x4),type="l")

> rug(x4)

> vioplot(x4,horizontal=TRUE,col="gray")

> library(vioplot)

> vioplot(x4,horizontal=TRUE,col="gray")

> boxplot(x4,horizontal=TRUE)

> x4<- rexp(250,rate=1)

> par(mfrow = c(3,1))

> hist(x4,freq=FALSE,breaks=20)

> points(density(x4),type="1")

Error in plot.xy(xy.coords(x, y), type = type, ...) :

invalid plot type '1'

> points(density(x4),type="l")

> rug(x4)

>

> library(vioplot)

> vioplot(x4,horizontal=TRUE,col="gray")

>

> boxplot(x4,horizontal=TRUE)

> x4\_df <- data.frame(x4)

> p1<- ggplot(x4\_df, aes(x= x4))

> p1 <-p1+geom\_histogram(aes(y=..density..),binwidth=0.5, colour="black", fill="white")

> p1 <- p1+geom\_density(alpha=0.1, fill="#FF6666")

> p1 <- p1+geom\_point(aes(y =-0.001),position=position\_jitter(height =0.0005),alpha=1/5)

> p2 <- ggplot(x4\_df, aes(x="x4",y= x4))

> p2<-p2+geom\_violin(fill="gray50")

> p2<-p2+ geom\_boxplot(width=0.2, alpha =3/4)

> p2<- p2+ coord\_flip()

> p3<- ggplot(x4\_df, aes(x ="x4",y =x4))

> p3<- p3+ geom\_boxplot()

> p3<- p3+coord\_flip()

> library (gridExtra)

> grid.arrange(p1, p2, p3, ncol=1)

> summary(x4)

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

0.004815 0.316668 0.664235 0.992606 1.390978 5.255634

> sd(x4)

[1] 0.9486121

> skewness(x4)

[1] 1.57734

> kurtosis(x4)

[1] 5.673031

> stem(x4)

The decimal point is at the |

0 | 00000000000111111111111111111111122222222222222222333333333333333333+9

0 | 5555555555555555666666666666666677777777777888888888888888999999999

1 | 000000001111111222222333333344444

1 | 55555555666666667888999

2 | 0001111222334

2 | 55566677799

3 | 00011122

3 | 569

4 | 2

4 | 9

5 | 3

> x5 <-15- rexp(250, rate = 0.5)

> par(mfrow=c(3,1))

> hist(x5, freq =FALSE, breaks= 20)

> points(density(x5), type ="l")

> rug(x5)

> library(vioplot)

> vioplot(x5, horizontal=TRUE, col="gray")

> boxplot(x5, horizontal=TRUE)

> x5\_df <- data.frame(x5)

> p1<- ggplot(x5\_df, aes(x= x5))

> p1 <-p1+geom\_histogram(aes(y=..density..),binwidth=0.5, colour="black", fill="white")

> p1 <- p1+geom\_density(alpha=0.1, fill="#FF6666")

> p1 <- p1+geom\_point(aes(y =-0.001),position=position\_jitter(height =0.0005),alpha=1/5)

> p2 <- ggplot(x5\_df, aes(x="x5",y= x5))

> p2<-p2+geom\_violin(fill="gray50")

> p2<-p2+ geom\_boxplot(width=0.2, alpha =3/4)

> p2<- p2+ coord\_flip()

> p3<- ggplot(x5\_df, aes(x ="x5",y =x5))

> p3<- p3+ geom\_boxplot()

> p3<- p3+coord\_flip()

> library (gridExtra)

> grid.arrange(p1, p2, p3, ncol=1)

> summary(x5)

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

8.212 12.286 13.518 13.076 14.329 14.995

> sd(x5)

[1] 1.604683

> skewness(x5)

[1] -1.074547

> kurtosis(x5)

[1] 3.431022

> stem(x5)

The decimal point is at the |

8 | 224

8 | 67

9 | 022344

9 | 67789

10 | 012334

10 | 55678899

11 | 000003333344

11 | 5566667888888899

12 | 0022333344444

12 | 55556777888888999

13 | 0000001122222233333333333344444444

13 | 5555566666677777777888888889999999

14 | 0000000011111111222222222233333333344444

14 | 55555555555555666666677777777777778888888888999999

15 | 0000

> x6 <- c(rnorm(150, mean = 100, sd=15), rnorm(150, mean=150, sd= 15))

> par(mfrow=c(3,1))

> hist(x6, freq =FALSE, breaks= 20)

> points(density(x6), type ="l")

> rug(x6)

> library(vioplot)

> vioplot(x6, horizontal=TRUE, col="gray")

> boxplot(x6, horizontal=TRUE)

> x6\_df <- data.frame(x6)

> p1<- ggplot(x6\_df, aes(x= x6))

> p1 <-p1+geom\_histogram(aes(y=..density..),binwidth=0.5, colour="black", fill="white")

> p1 <- p1+geom\_density(alpha=0.1, fill="#FF6666")

> p1 <- p1+geom\_point(aes(y =-0.001),position=position\_jitter(height =0.0005),alpha=1/5)

> p2 <- ggplot(x6\_df, aes(x="x6",y= x6))

> p2<-p2+geom\_violin(fill="gray50")

> p2<-p2+ geom\_boxplot(width=0.2, alpha =3/4)

> p2<- p2+ coord\_flip()

> p3<- ggplot(x6\_df, aes(x ="x6",y =x6))

> p3<- p3+ geom\_boxplot()

> p3<- p3+coord\_flip()

> library (gridExtra)

> grid.arrange(p1, p2, p3, ncol=1)

> summary(x6)

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

68.32 98.84 128.01 124.94 149.58 191.87

> sd(x6)

[1] 28.71055

> skewness(x6)

[1] -0.09713651

> kurtosis(x6)

[1] 1.839069

> stem(x6)

The decimal point is 1 digit(s) to the right of the |

6 | 8

7 | 13444555667889

8 | 00122333455555566678889999

9 | 0000111222333445555555666667788999999

10 | 00001111111224444556666677799

11 | 011222333444455677889

12 | 11122223444555556777788899

13 | 0111233334455555667778888899999

14 | 0000011112222333444445555666777788999999

15 | 0000011111222233333334455566677778888899

16 | 0001111122222333357788999

17 | 01334458

18 | 1

19 | 2

> source("D:/DeepLearn/course/102/1/aa.R")

Error in media(a) : could not find function "media"

>