

> #2020/10/23(五), 109 學年第一學期 資料科學應用 R 作業(1)

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> #ex1.7(a)

> rep(LETTERS[1:5], seq(5,1,-1))

[1] "A" "A" "A" "A" "A" "B" "B" "B" "B" "C"

[11] "C" "C" "D" "D" "E"

> #ex1.7(b)

> c(letters[seq(2,26,2)],letters[seq(1,26,2)])

[1] "b" "d" "f" "h" "j" "l" "n" "p" "r" "t"

[11] "v" "x" "z" "a" "c" "e" "g" "i" "k" "m"

[21] "o" "q" "s" "u" "w" "y"

> #ex1.7(c)

> require(MASS)

> x<-1:100

> y<-rep(c(1,-1),50)

> fractions(y/x)

[1] 1 -1/2 1/3 -1/4 1/5

[6] -1/6 1/7 -1/8 1/9 -1/10

[11] 1/11 -1/12 1/13 -1/14 1/15

[16] -1/16 1/17 -1/18 1/19 -1/20

[21] 1/21 -1/22 1/23 -1/24 1/25

[26] -1/26 1/27 -1/28 1/29 -1/30

[31] 1/31 -1/32 1/33 -1/34 1/35

[36] -1/36 1/37 -1/38 1/39 -1/40

[41] 1/41 -1/42 1/43 -1/44 1/45

[46] -1/46 1/47 -1/48 1/49 -1/50

[51] 1/51 -1/52 1/53 -1/54 1/55

[56] -1/56 1/57 -1/58 1/59 -1/60

[61] 1/61 -1/62 1/63 -1/64 1/65

[66] -1/66 1/67 -1/68 1/69 -1/70

[71] 1/71 -1/72 1/73 -1/74 1/75

[76] -1/76 1/77 -1/78 1/79 -1/80

[81] 1/81 -1/82 1/83 -1/84 1/85

[86] -1/86 1/87 -1/88 1/89 -1/90

[91] 1/91 -1/92 1/93 -1/94 1/95

[96] -1/96 1/97 -1/98 1/99 -1/100

> #ex1.7(d)

> c(month.abb[1:12][seq(1,11,2)],month.abb[1:12][seq(2,12,2)])

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[1] "Jan" "Mar" "May" "Jul" "Sep" "Nov"
[7] "Feb" "Apr" "Jun" "Aug" "Oct" "Dec"
> 1.23
[1] 1.23
> #ex1.23(a)
> math.score<-c(43, 94, 20, 8, 46, 72, 93, 8, 28, 33, 79, 60, 93, 52, 8)
> #ex1.23(b)
> length( math.score)
[1] 15
> #ex1.23(c)
> math.score[1:15][seq(2,15,2)]
[1] 94 8 72 8 33 60 52
> mean(math.score[1:15][seq(2,15,2)])
[1] 46.71429
> #ex1.23(d)
> X<-1:length( math.score)
> cat(Y<-X[math.score>=60])
2 6 7 11 12 13> length(Y)
[1] 6
>
> #ex1.37(a)
> age<-c(54, 64, 75, 21, 66, 49, 25, 72, 50, 72)
> gender<-c("女", "男", "男", "女", "女", "男", "男", "女", "男", "女")
> index<-c(86, 30, NA, 43, 35, 42, 31, 7, 29, 80)
> sat<-c("滿意", "非常滿意", "非常不滿意", "非常滿意", "普通", "非常不滿意", "普通", "滿意",
+ "普通", "非常滿意")
> X<-factor
> #ex1.37(b)
> sat.id <- (1:length(sat.ordered))[sat.ordered >="滿意"]
> length(sat.id)
[1] 5
>
> #ex1.37(c)
> i <- index[age >= 40 & gender == "男"]
> mean(i, na.rm = TRUE)
[1] 33.66667
>

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