4.

a.

> x <- "Label"

> paste(n,1:30,sep = " ")

[1] "Label 1" "Label 2" "Label 3" "Label 4" "Label 5" "Label 6"

[7] "Label 7" "Label 8" "Label 9" "Label 10" "Label 11" "Label 12"

[13] "Label 13" "Label 14" "Label 15" "Label 16" "Label 17" "Label 18"

[19] "Label 19" "Label 20" "Label 21" "Label 22" "Label 23" "Label 24"

[25] "Label 25" "Label 26" "Label 27" "Label 28" "Label 29" "Label 30"

b.

> y<- "FN"

> paste(y,1:30,sep = "")

[1] "FN1" "FN2" "FN3" "FN4" "FN5" "FN6" "FN7" "FN8" "FN9" "FN10"

[11] "FN11" "FN12" "FN13" "FN14" "FN15" "FN16" "FN17" "FN18" "FN19" "FN20"

[21] "FN21" "FN22" "FN23" "FN24" "FN25" "FN26" "FN27" "FN28" "FN29" "FN30"

5.

|  |
| --- |
| > amt <- function(p,r,n){p\*(1+r/100)^n}  > amt(10000,0.1125,1:15)  [1] 10011.25 10022.51 10033.79 10045.08 10056.38 10067.69 10079.02 10090.36  [9] 10101.71 10113.07 10124.45 10135.84 10147.24 10158.66 10170.09 |
|  |
| |  | | --- | |  | |

6.

> z<- matrix(c(1:5,101:105,201:205,301:305), nrow = 5)

> z

[,1] [,2] [,3] [,4]

[1,] 1 101 201 301

[2,] 2 102 202 302

[3,] 3 103 203 303

[4,] 4 104 204 304

[5,] 5 105 205 305

7.

> set.seed(100)

> GMAT=matrix(sample(10,size=60,replace=T),nr=6)

> GMAT

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

[1,] 4 9 3 4 5 5 2 8 3 6

[2,] 3 4 4 7 2 10 7 9 4 3

[3,] 6 6 8 6 8 4 10 7 4 2

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

[5,] 5 7 3 6 6 7 4 8 3 6

[6,] 5 9 4 8 3 9 9 9 3 3

a.

> g4<- apply(GMAT,1,function(x)x>4)

> summary(g4)

V1 V2 V3 V4

Mode :logical Mode :logical Mode :logical Mode :logical

FALSE:5 FALSE:6 FALSE:3 FALSE:5

TRUE :5 TRUE :4 TRUE :7 TRUE :5

NA's :0 NA's :0 NA's :0 NA's :0

V5 V6

Mode :logical Mode :logical

FALSE:3 FALSE:4

TRUE :7 TRUE :6

NA's :0 NA's :0

##no. of “true” = 34

b.

2nd and 5th rows have exactly 2 occurrences of 7

c.

> sum<- colSums(GMAT)

> rbind(GMAT,sum)

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

4 9 3 4 5 5 2 8 3 6

3 4 4 7 2 10 7 9 4 3

6 6 8 6 8 4 10 7 4 2

1 2 7 8 9 10 2 5 2 3

5 7 3 6 6 7 4 8 3 6

5 9 4 8 3 9 9 9 3 3

sum 24 37 29 39 33 45 34 46 19 23