HW2\_draft

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# Problems

# Computer exercises

## Question 1

Replicate the following vector of numbers using **seq()** function and call it **v1.**

v1 <- seq(from = 1,to = 17,by = 4)  
v1

[1] 1 5 9 13 17

## Question 2

### part I

Replicate the following matrix in R and call it A.

a <- matrix(20:39,4,5, byrow = TRUE)  
a

[,1] [,2] [,3] [,4] [,5]  
[1,] 20 21 22 23 24  
[2,] 25 26 27 28 29  
[3,] 30 31 32 33 34  
[4,] 35 36 37 38 39

colnames(a)<-(c('A','B','C','D','E'))  
a

A B C D E  
[1,] 20 21 22 23 24  
[2,] 25 26 27 28 29  
[3,] 30 31 32 33 34  
[4,] 35 36 37 38 39

B <- a[c(2,4), c("B", "D")]  
B

B D  
[1,] 26 28  
[2,] 36 38

t(B)

[,1] [,2]  
B 26 36  
D 28 38

B.inverse <- solve(B)  
B.inverse

[,1] [,2]  
B -1.9 1.4  
D 1.8 -1.3

B2 <- B.inverse%\*%B  
B2

B D  
B 1 0  
D 0 1

df <- mtcars  
head(df)

mpg cyl disp hp drat wt qsec vs am gear carb  
Mazda RX4 21.0 6 160 110 3.90 2.620 16.46 0 1 4 4  
Mazda RX4 Wag 21.0 6 160 110 3.90 2.875 17.02 0 1 4 4  
Datsun 710 22.8 4 108 93 3.85 2.320 18.61 1 1 4 1  
Hornet 4 Drive 21.4 6 258 110 3.08 3.215 19.44 1 0 3 1  
Hornet Sportabout 18.7 8 360 175 3.15 3.440 17.02 0 0 3 2  
Valiant 18.1 6 225 105 2.76 3.460 20.22 1 0 3 1