

Assignment_0

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February 21, 2019

```
setwd("/root/Documents/SRT411/Assignment0")
```

3.2

```
a = (2017-2014)
b = (2014-1997)
c = 100
(a/b)*c
```

```
## [1] 17.64706
```

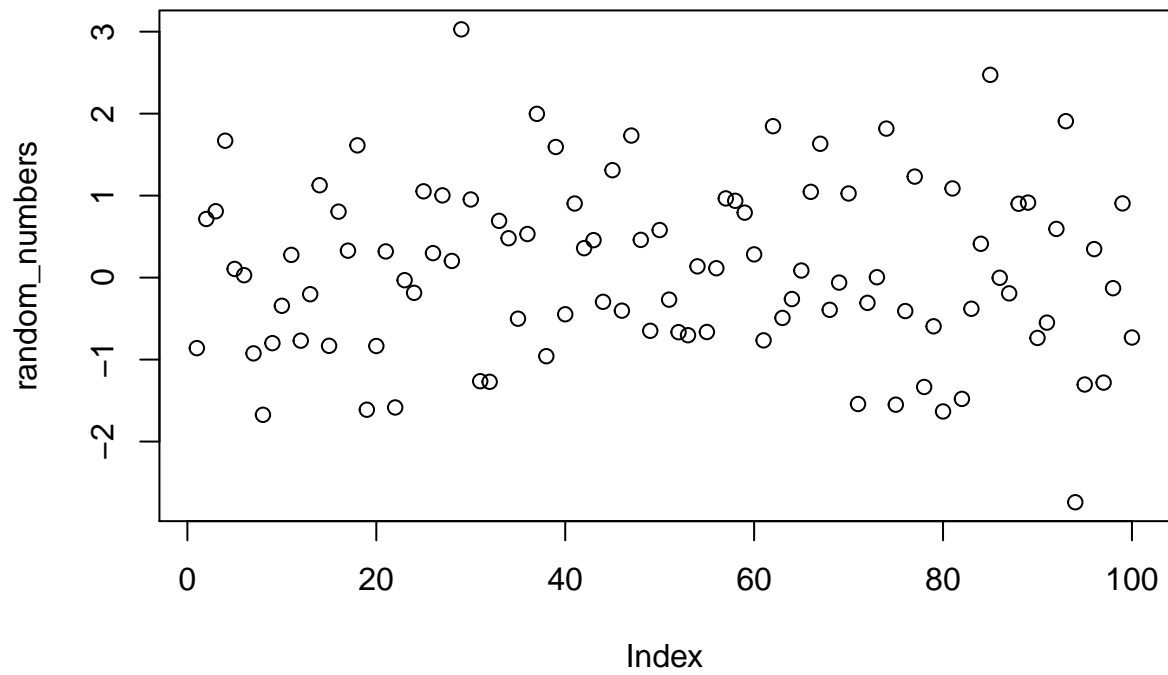
3.4

```
vector=c(4,5,8,11)
sum(vector)
```

```
## [1] 28
```

3.5

```
random_numbers=rnorm(100)
plot(random_numbers)
```

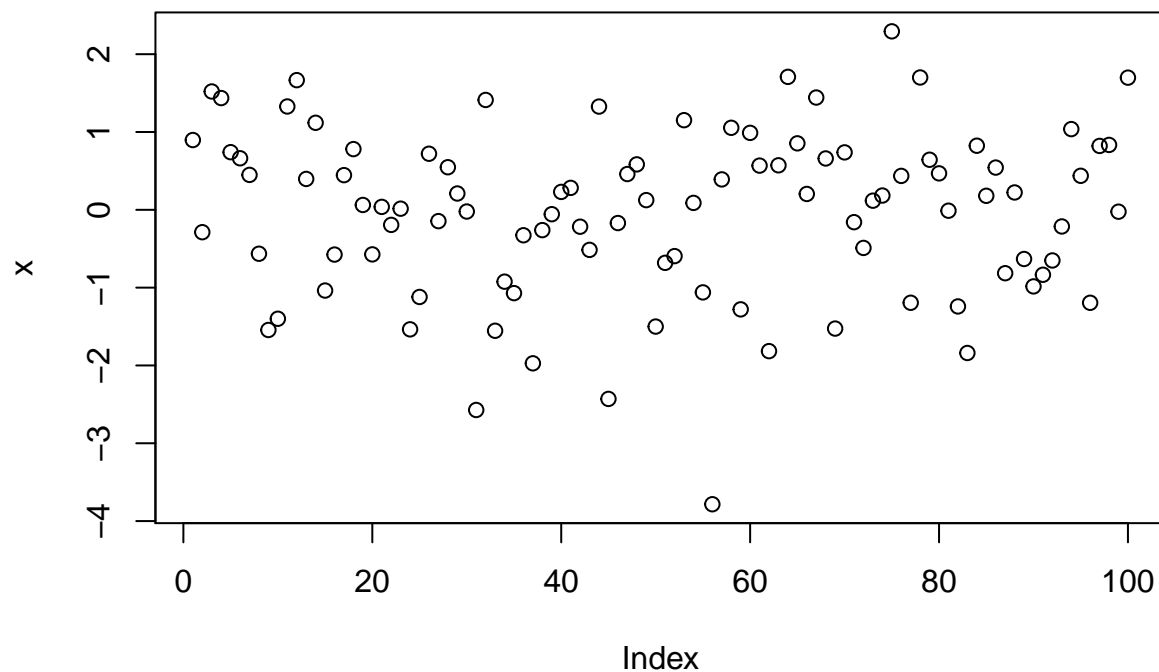


4.0

```
help(sqrt)
```

5.0

```
source("firstscript.R")
```



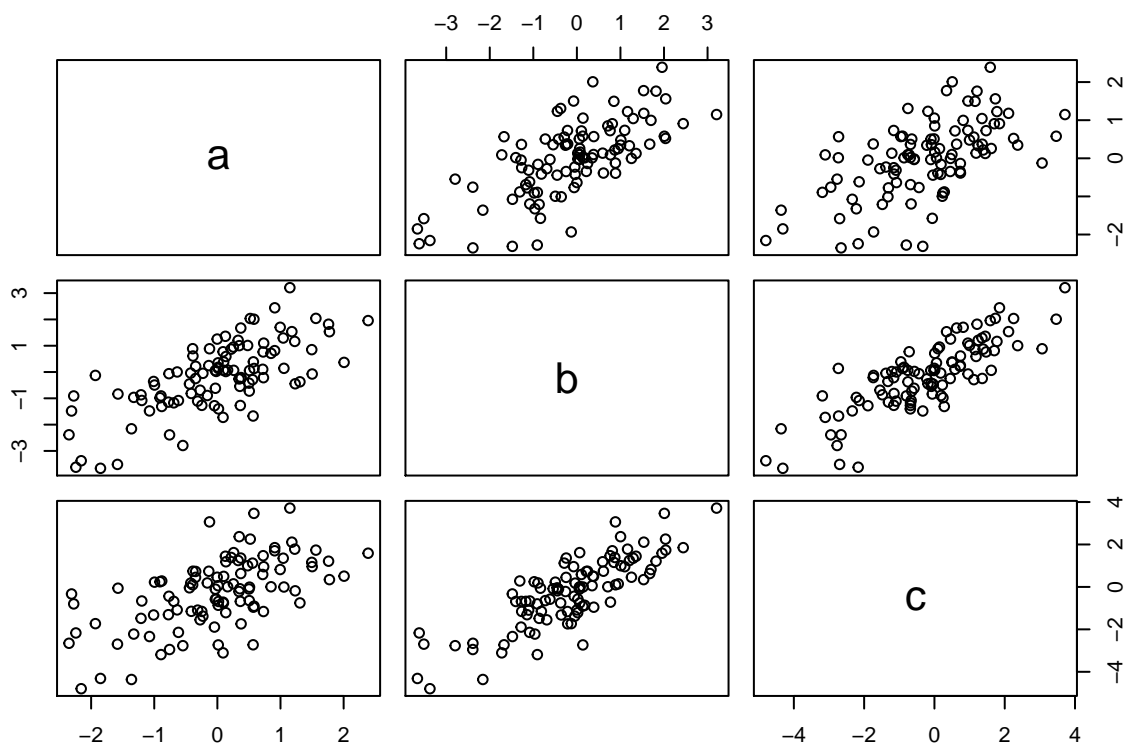
6.2

```
P <- seq(from=31, to=60, by=1)
Q <- matrix(P, ncol=5, nrow=6)
Q
```

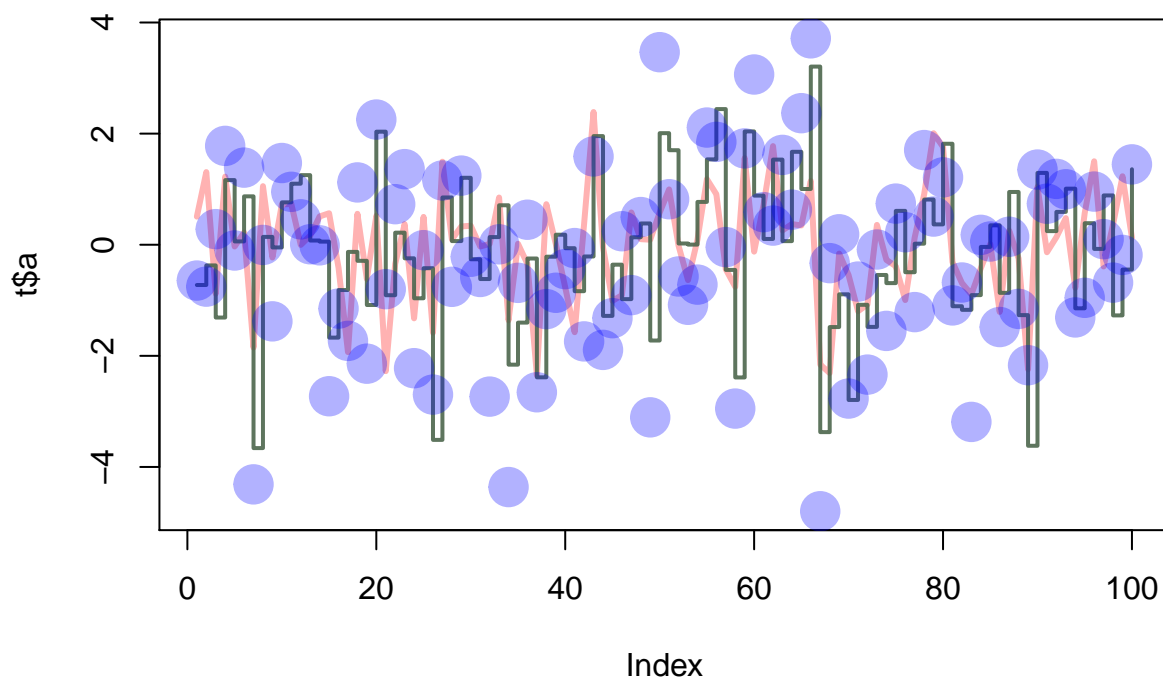
```
##      [,1] [,2] [,3] [,4] [,5]
## [1,]  31  37  43  49  55
## [2,]  32  38  44  50  56
## [3,]  33  39  45  51  57
## [4,]  34  40  46  52  58
## [5,]  35  41  47  53  59
## [6,]  36  42  48  54  60
```

6.3 and 7.0

```
x1 <- rnorm(100)
x2 <- rnorm(100)
x3 <- rnorm(100)
t <- data.frame(a=x1, b=x1+x2, c=x1+x2+x3)
plot(t)
```



```
plot(t$a, type="l", ylim=range(t),
     lwd=3, col=rgb(1,0,0,0.3))
lines(t$b, type="s", lwd=2,
      col=rgb(0.3,0.4,0.3,0.9))
points(t$c, pch=20, cex=4,
       col=rgb(0,0,1,0.3))
```



Q8.0

```
d = data.frame(a = c(3,4,5), b = c(12,43,54))
write.table(d, file="tst1.txt",row.names = FALSE)
d2 = read.table(file="tst1.txt",header = TRUE)
d2 = d$a * 5
d3 = write.table(d2, file="tst2.txt")
```

Q9.0

```
v <- rnorm(100)
v2 <- sqrt(v)
```

```
## Warning in sqrt(v): NaNs produced
```

```
mean(v2)
```

```
## [1] NaN
```

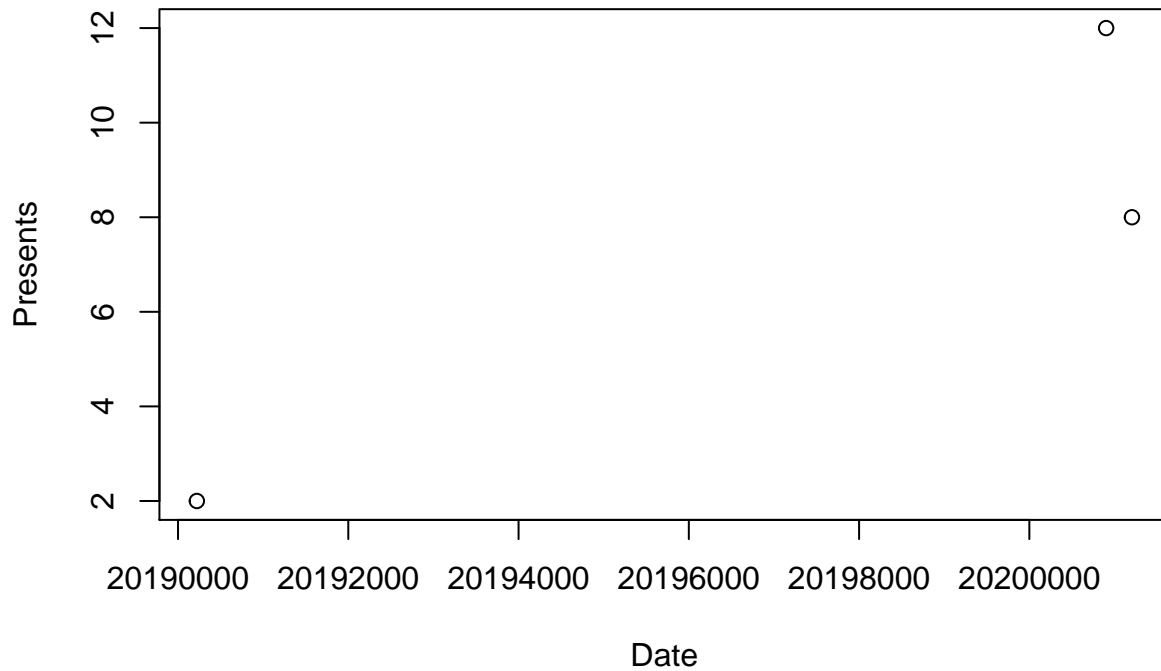
```
v2
```

```
##      [1]      NaN      NaN      NaN      NaN 0.95878341 0.70499663
##      [7]      NaN      NaN 1.15049832      NaN 1.05955826      NaN
##     [13] 1.09177502      NaN 0.17595291      NaN 0.99771348      NaN
##     [19] 0.84464786 0.97864460 1.12914856      NaN 1.16382815      NaN
```

```
## [25] 1.10093024      NaN 0.98086890      NaN      NaN 1.19754624
## [31]      NaN 0.42334314      NaN      NaN      NaN      NaN
## [37] 1.13230346      NaN      NaN 0.73683681      NaN 0.60530130
## [43] 0.11387252      NaN      NaN      NaN 1.12487343 1.10135835
## [49]      NaN      NaN 1.28810455 0.97114519      NaN 1.16764351
## [55] 1.28863768 0.49974385      NaN 0.04934502 1.13208919 0.99210242
## [61]      NaN      NaN 1.12695918      NaN      NaN 0.43651023
## [67] 1.09486119      NaN 1.28077198 1.02233785 0.81450939      NaN
## [73] 0.95792185      NaN      NaN      NaN      NaN 1.20148323
## [79] 1.20515297      NaN 0.95673599 0.47205299 1.09448092 0.98895939
## [85]      NaN      NaN      NaN 0.90042954      NaN 0.73196422
## [91] 0.45971154      NaN 1.39750571      NaN      NaN      NaN
## [97]      NaN      NaN      NaN 1.24406504
```

Q10.2

```
Date <- c("20190221", "20201205", "20200902")
Presents <- c(2, 8, 12)
plot(Date, Presents)
```



Q11.2

```
num <- seq(from = 1, to = 100, by=1)
f=c()
```

```

for(d in 1:100)
{
  if(num[d]<5 | num[d]>90)
    {f[d]=num[d]*10}
  else
    {f[d]=num[d]*0.1}
}
f

```

```

##   [1]   10.0   20.0   30.0   40.0    0.5    0.6    0.7    0.8    0.9    1.0
##  [11]    1.1    1.2    1.3    1.4    1.5    1.6    1.7    1.8    1.9    2.0
##  [21]    2.1    2.2    2.3    2.4    2.5    2.6    2.7    2.8    2.9    3.0
##  [31]    3.1    3.2    3.3    3.4    3.5    3.6    3.7    3.8    3.9    4.0
##  [41]    4.1    4.2    4.3    4.4    4.5    4.6    4.7    4.8    4.9    5.0
##  [51]    5.1    5.2    5.3    5.4    5.5    5.6    5.7    5.8    5.9    6.0
##  [61]    6.1    6.2    6.3    6.4    6.5    6.6    6.7    6.8    6.9    7.0
##  [71]    7.1    7.2    7.3    7.4    7.5    7.6    7.7    7.8    7.9    8.0
##  [81]    8.1    8.2    8.3    8.4    8.5    8.6    8.7    8.8    8.9    9.0
##  [91]  910.0  920.0  930.0  940.0  950.0  960.0  970.0  980.0  990.0 1000.0

```

Q11.3

```

fun1 = function(arg1)
{len = length(arg1)
  for(q in 1:len)
  {if (arg1[q] < 5 | arg1[q] > 90)
    {arg1[q] = arg1[q] * 10}
  else
    {arg1[q] = arg1[q] * 0.1}}
  return (arg1)
}
m=5:40
fun1(arg1=m)

```

```

##   [1] 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1
##  [18] 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8
##  [35] 3.9 4.0

```