

SRT411__A0

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February 15, 2019

This assignment is discussing on using R Studio, plotting a data graph on the application. This assignment provides a lesson on the advantages of R and idea of how to use the programming with the explanation.

Document:<https://cran.r-project.org/doc/contrib/Torfs+Brauer-Short-R-Intro.pdf>

ToDo 1 Calculator

```
((2019-2012)/(2019-1992))*100  
## [1] 25.92593
```

ToDo 2 Variables

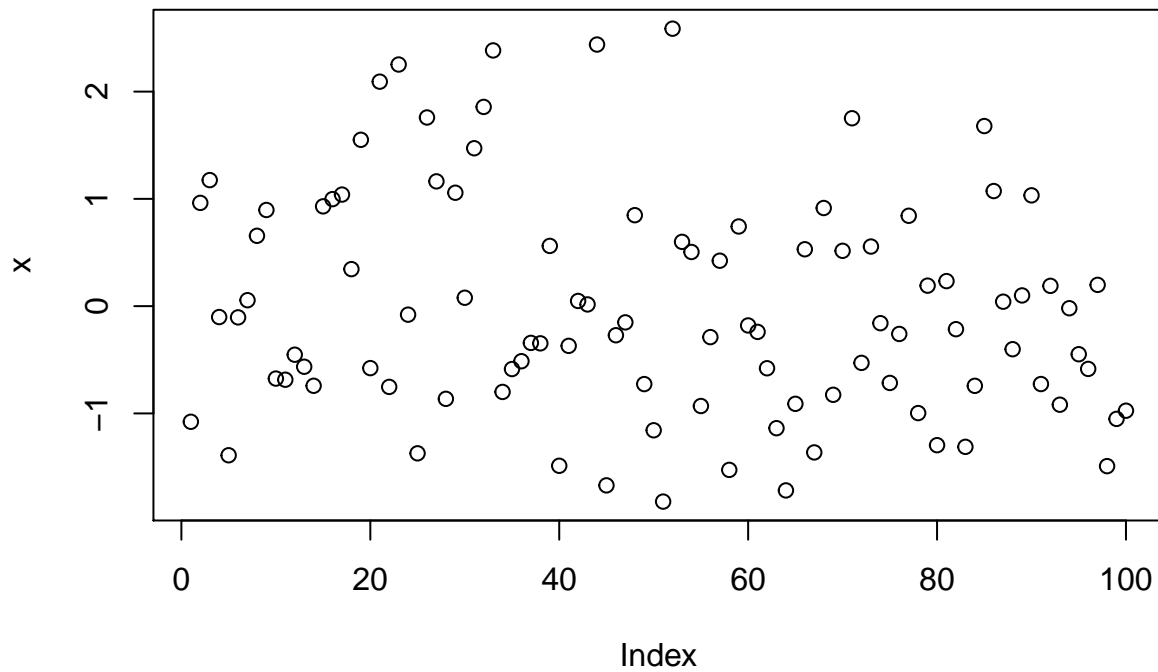
```
school = 2019-2012  
life = 2019-1992  
(school/life)*100  
## [1] 25.92593
```

ToDo 3 Functions

```
c=c(4,5,8,11)  
mean(x=c)  
## [1] 7
```

ToDo 4 Plots

```
x=rnorm(100)  
plot(x)
```



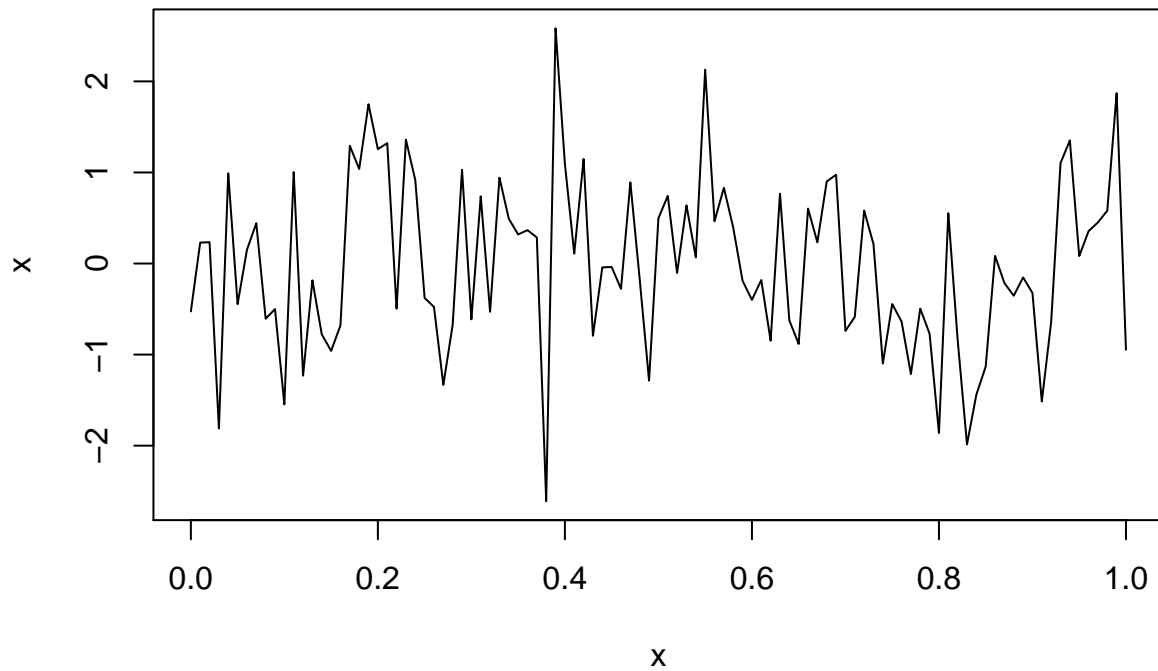
#ToDo

5 Help

`help(sqrt)`

ToDo 6 Scripts

`source("todo6.R")`



#ToDo

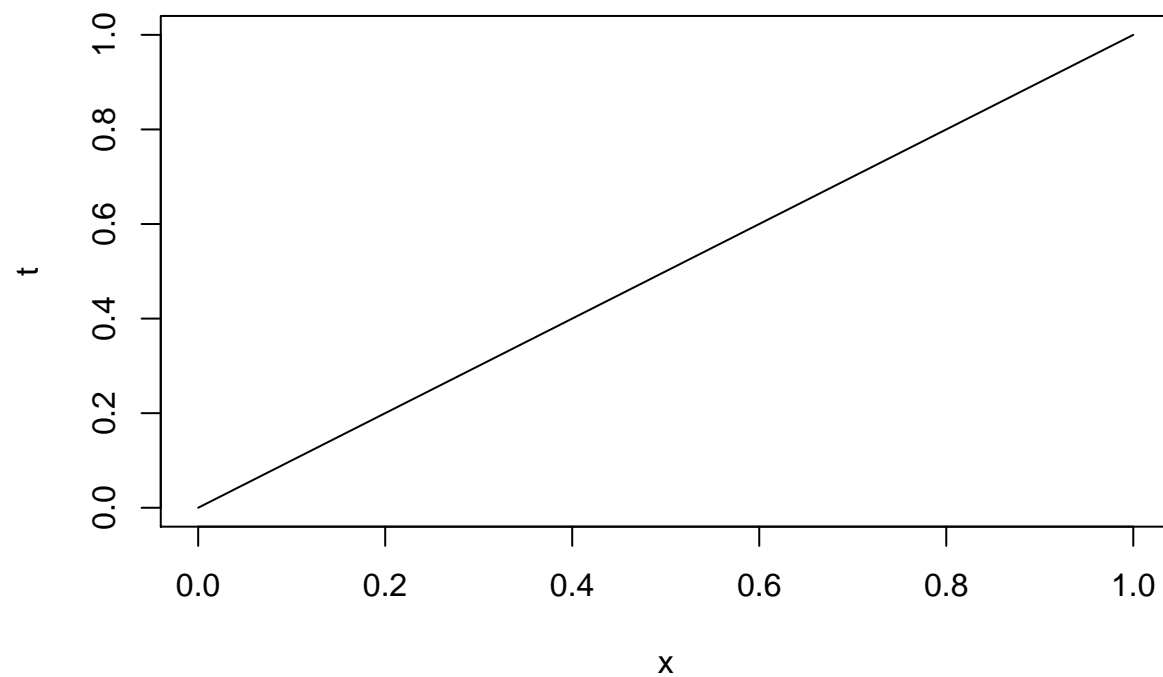
7 Matrices

```
P=seq(from=31,to=60,by=1)
Q=matrix(data=P,ncol=5)
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
```

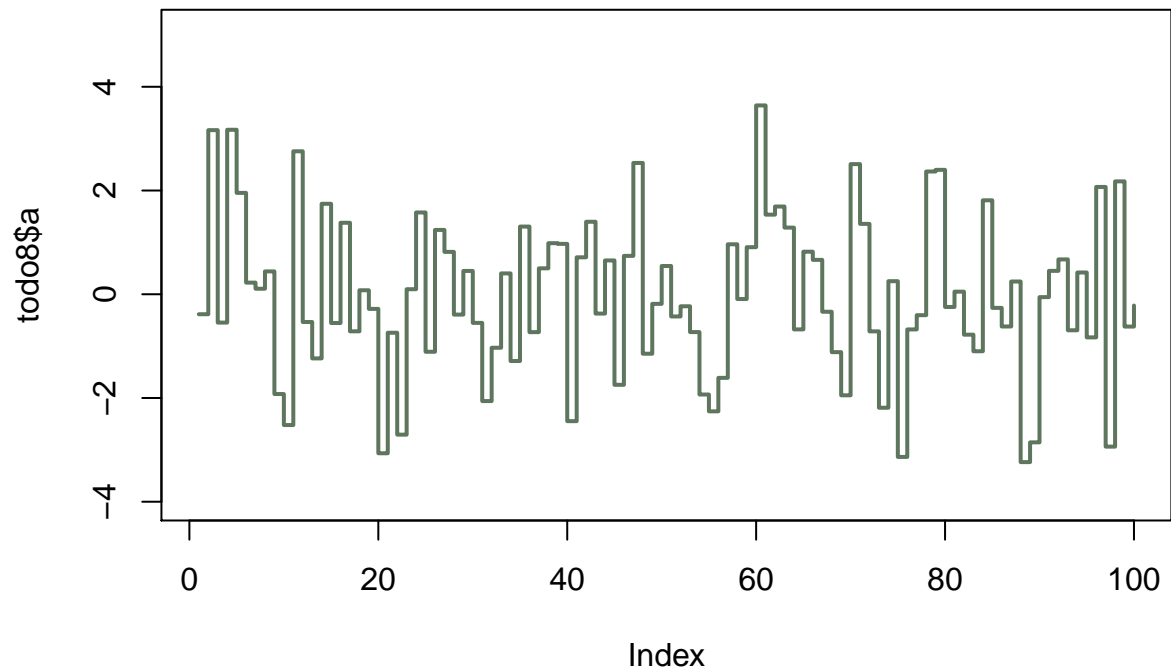
ToDo 8 Data Frames

```
source("todo8.R")
plot(t)
```



```
#ToDo 9 Graphics
```

```
source("todo9.R")
```



#ToDo 10 Reading and Writing data

```
source("todo10.R")
todo10
```

```
##      a      g      x
## 1     1     10     3
## 2     2     20     6
## 3     8     80    24
## 4    16    160    48
## 5    32    320    96
```

ToDo 11 Notavailable Data

```
mean(x=sqrt(rnorm(100)))
```

```
## Warning in sqrt(rnorm(100)): NaNs produced
## [1] NaN
```

ToDo 12 Dates

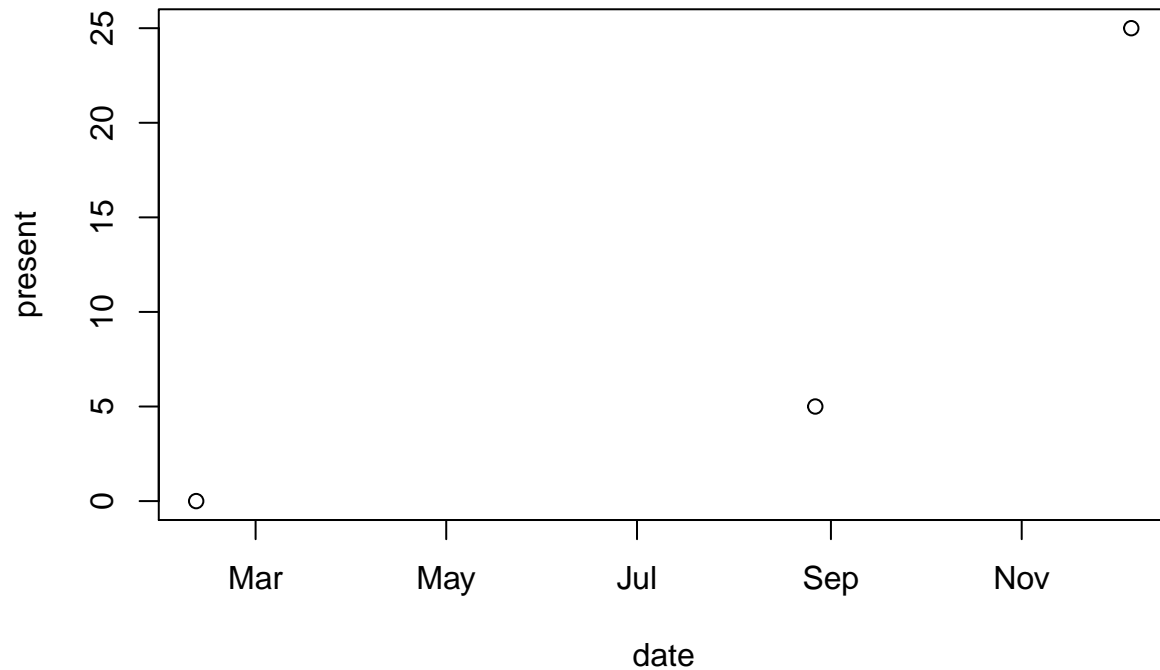
```
date=strptime(c("20190210","20191206","20190827"),format="%Y%m%d")
date
```

```
## [1] "2019-02-10 PST" "2019-12-06 PST" "2019-08-27 PDT"
```

```
present=c(0,25,5)
present
```

```
## [1] 0 25 5
```

```
plot(x=date,y=present)
```



```
#ToDo 13 For-Loop
```

```
source("todo13.R")
```

```
np13
```

```
## [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
```

ToDo 14 Writing your own function

```
source("todo14.R")
```

```
todo14(arg1=1,arg2=100)
```

```
## [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
```

ToDo 15 Footnote

```
source("todo15.R")
todo15
```

```
## [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
```