SRT411A0-Justin Gourgouvelis

Todo #1 Perform calculation, get percentage

```
((2018-2014)/(2014-1984)) * 100
```

```
## [1] 13.33333
```

Todo #2 Save answer to variable, erase variable

```
percent=((2018-2014)/(2014-1984)) * 100
rm(percent)
```

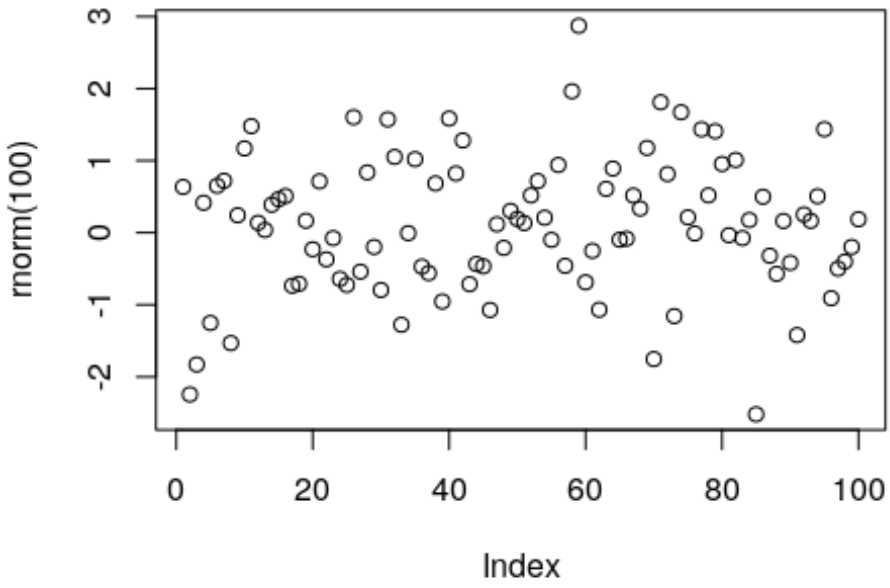
Todo #3 Sum of numbers

```
sum(4,5,8,11)
```

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

Todo #4 Plot 100 random numbers

```
plot(rnorm(100))
```



Todo #5 Open Manual for Square Root Function

```
help(sqrt)
```

Todo #6 Make sequence from 31 to 61, then display them as both a row and a matrix P and Q

```
p=seq(from=31, to=60, by=1)
q=matrix(p,ncol=5, nrow=6)
p
```

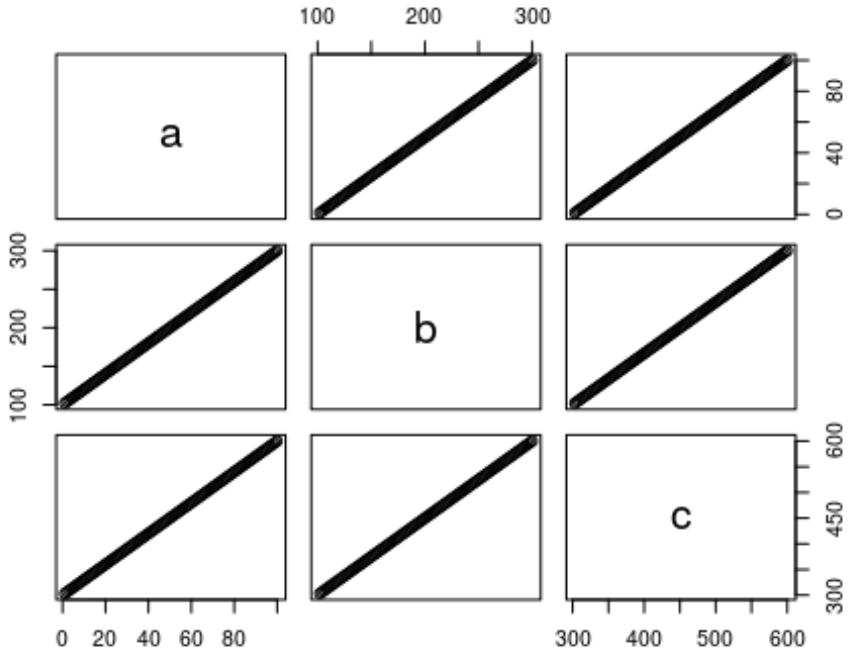
```
##  [1] 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53
## [24] 54 55 56 57 58 59 60
```

```
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
```

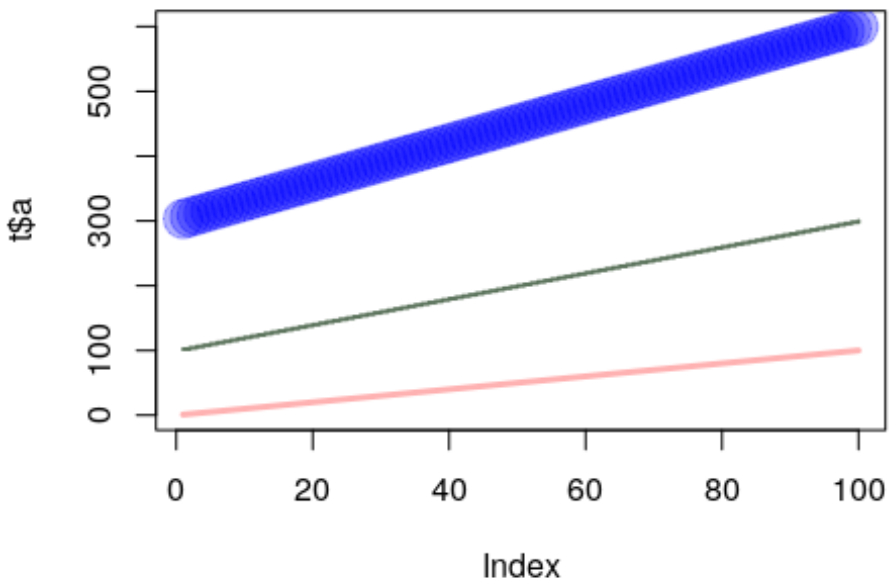
Todo #7 Create new matrix x1,x2,x3 making a data frame with columns a,b,c. Displaying information

```
x1=seq(from=1, to=100, by=1)
x2=seq(from=101, to=200, by=1)
x3=seq(from=201, to=300, by=1)
t= data.frame(a=x1,b=x1+x2,c=x1+x2+x3)
plot(t)
```



Todo #8 Add colors to the graph rgb = red,green,blue. Level of color dependant on number provided

```
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))
```



Todo #9 Take a Sqaure Root of the mean of 100 random numbers

```
sqrt(mean(rnorm(100)))
```

```
## [1] 0.4153225
```

Todo #10 Create a file tst1.txt and add information to that file. Change the file by calculating values

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

```
## [1] 15 20 25
```

Todo #11 Enter Today's date and date of my birthday this year

```
date1=strptime( c("20190219","20190815"),format="%Y%m%d")
present=c(10,6)
date1
```

```
## [1] "2019-02-19 EST" "2019-08-15 EDT"
```

Todo #12 Create a for loop that checks i against a number and performs calculations based on the result

```
vector=seq(from=1, to=100, by=1)
s=c()
```

```
for(i in 1:100)
{
  if(vector[i]<5)
  {
    s[i]=vector[i]*5;
  }
  else if(vector[i]>90)
  {
    s[i]=vector[i]*10;
  }
  else
  {
    s[i]=vector[i]*0.1;
  }
}
s
```

```
##   [1]    5.0   10.0   15.0   20.0    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 #13 create a function that will take in a value i for calculation

```
fun= function(arg1,arg2 )
{
  vector[i]=arg1[i];
  for(i in length(vector))
  {

  }
}
```