hw1.R

jiayuan

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```
#1
#a
a=c(22 , 36 , 35 , 47 ,  36 , 34 , 13)
b=c(23 , 20 , 11 ,   9 ,  31 , 34)
ma=mean(a)
mb=mean(b)
sda=sd(a)
sdb=sd(b)

#2
dietstudy <-read.csv("/Users/jiayuan/Documents/MA684/dietstudy.csv", header = TRUE)
dietstudy
```

```
##    SubjNum Diet WtLoss
## 1        1    1     22
## 2        2    1     36
## 3        3    1     35
## 4        4    1     47
## 5        5    1     36
## 6        6    1     34
## 7        7    1     13
## 8        8    2     23
## 9        9    2     20
## 10      10    2     11
## 11      11    2      9
## 12      12    2     31
## 13      13    2     34
```

```
dietA<-dietstudy$WtLoss[1:7]
dietB<-dietstudy$WtLoss[8:13]
mean(dietA)
```

```
## [1] 31.85714
```

```
mean(dietB)
```

```
## [1] 21.33333
```

```
sd(dietA)
```

```
## [1] 11.03674
```

```
sd(dietB)
```

```
## [1] 10.17186
```

```r
t.test(dietA)
```

```
##
##  One Sample t-test
##
## data:  dietA
## t = 7.6369, df = 6, p-value = 0.0002631
## alternative hypothesis: true mean is not equal to 0
## 95 percent confidence interval:
##  21.64987 42.06442
## sample estimates:
## mean of x
##  31.85714
```

```r
t.test(dietstudy$WtLoss ~ dietstudy$Diet,var.equal=TRUE)
```

```
##
##  Two Sample t-test
##
## data:  dietstudy$WtLoss by dietstudy$Diet
## t = 1.7758, df = 11, p-value = 0.1034
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.520114 23.567733
## sample estimates:
## mean in group 1 mean in group 2
##        31.85714        21.33333
```