

Task 1

```
> 1/3 + 1/4
[1] 0.5833333
> 2 ^ 10 + 1
[1] 1025
> f = 440
> log(1127)
[1] 7.027315
> x = log(1127)
> x * (1 + f / 700)
[1] 11.44448
> a = 2
> b = 4
> c = -4
> (-b + sqrt(b ^ 2 - 4 * a * c)) / 2 * a
[1] 2.928203
```

Task 2

```
> data <- fread("/Users/biatrix/Desktop/Stats/NYC.csv")
> t1 <- data[emphasis == "emphatic" & word == "fourth"]
> t1[,.(total=sum(r), .N), by=r]
r total  N
1: 1    1 35
2: 0    0 112
> q <- t1[emphasis == "emphatic" & word == "fourth" & r == 1, length(r)]
> q
[1] 35

> t2 <- data[store == "Klein's" & word == "floor"]
> head(t2)
  r store emphasis word
1: 1 Klein's  normal floor
2: 1 Klein's  normal floor
3: 1 Klein's  normal floor
4: 1 Klein's  normal floor
5: 1 Klein's  normal floor
6: 1 Klein's emphatic floor
> t2[,.(total=sum(r), .N), by=emphasis == "emphatic"]
emphasis total  N
```

```

1: FALSE 5 64
2: TRUE 7 40
> x[,.(tot=sum(total), .N)]
  tot N
1: 12 2
> 12/104 * 100
[1] 11.53846
11.5 % of the time

```

Task 3

```

> data2 <- fread("/Users/biatrix/Desktop/Stats/VOT.tsv")
> head(data2)
  participant language item repetition  vot
1: monoSp00 spanish  da      1 -61.56
2: monoSp00 spanish  da      2 -67.00
3: monoSp00 spanish  da      3 -56.95
4: monoSp00 spanish  de      1 -61.16
5: monoSp00 spanish  de      2 -54.46
6: monoSp00 spanish  de      3 -47.44

> vot = data2$vot
> quantile(vot)
 0%  25%  50%  75% 100%
-85.290 -17.975 13.825 27.365 82.860

> aggregate(data2[, 5], list(data2$language), mean)
  Group.1    vot
1 english 32.43242
2 spanish -24.31306

> aggregate(data2[, 5], list(data2$language), sd)
  Group.1    vot
1 english 19.86479
2 spanish 36.41377

> aggregate(data2[, 5], list(data2$language == "english"), sd)
  Group.1    vot
1 FALSE 36.41377
2 TRUE 19.86479

```