

Solutions to Final exercise - R intro course

1) The “ ’ ” in “N’ s” creates trouble. Fix: remove it or set `quote=""` in `read.table`

```
blat<-read.table("blat_result", sep="\t", header=TRUE, as.is=TRUE,
quote="")

M<-matrix(0,nrow=length(unique(blat$T_name)), ncol=length(unique(blat
$Q_name)))

dimnames(M)<-list(unique(blat$T_name), unique(blat$Q_name))

for(i in 1:nrow(blat)){M[blat$T_name[i], blat$Q_name[i]]<- blat$match[i]/
blat$Q_size[i]}

heatmap(M)
```

2)

```
my_silly.f<-function(M){
  return(sd(rowMeans(M)))
}
```

3)

```
score<-vector(length=1000)
for(i in 1:1000){
  score[i]<-sum(sample(1:7)==1:7)
}
hist(score)
```

4) `cor(state.x77)`

```
heatmap(cor(state.x77))
require(cluster)
hclust(as.dist(cor(state.x77)*-1))
```

5) Possible comments:

Reading in a design table, and making a factor: Treatment

load a set of CEL files and preprocess them using RMA

Run t-test on each probe-set

calculate fold change

writing the analysis to a file (ordered by significance)