

class12hw

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CLASS12 HW

Section 4: Population Scale Analysis. One sample is obviously not enough to know what is happening in a population. You are interested in assessing genetic differences on a population scale.

Q.13

```
expr <- read.table("rs8067378_ENSG000000172057.6.txt")  
  
table(expr$geno)
```

```
A/A A/G G/G  
108 233 121
```

The sample size for A/A is 108, for A/G is 233, and G/G is 121.

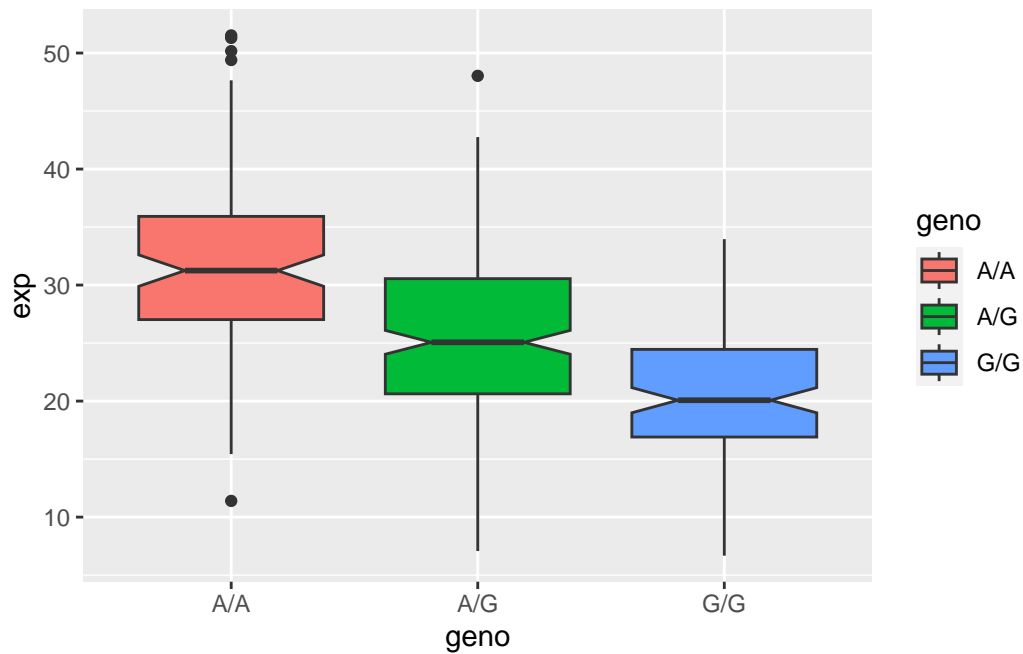
```
aa <- expr[expr$geno == "AA"]  
  
table(aa$exp)
```

```
< table of extent 0 >
```

Q.14

```
library(ggplot2)

ggplot(expr) + aes(geno, exp, fill=geno) + geom_boxplot(notch=TRUE)
```



Yes, the SNP affects the expression of ORMDL3. Having G/G appears to be associated with a reduced expression of the gene whereas having A/A is associated with higher expression of ORMDL3. Being heterozygous (A/G) is between these two expression levels.