Lab 2 Drug Trials Lab

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```
trim800 <- head(lab2, 4)
mean(trim800$Red1)
```

```
## [1] 3.25
```

```
mean(trim800$Red1d)
```

```
## [1] 2.25
```

```
sd(trim800$Red1d)
```

```
## [1] 0.5
```

```
sd(trim800$Red1)
```

```
## [1] 0.5
```

```
mean(lab2$Red1)
```

```
## [1] 2.895833
```

```
mean(lab2$Red1d)
```

```
## [1] 1.833333
```

```
sd(lab2$Red1)
```

```
## [1] 1.207064
```

```
sd(lab2$Red1d)
```

```
## [1] 0.8336879
```

```
mean(trim800$Blue1)
```

```
## [1] 1.25
```

```
mean(trim800$Blue1d)
```

```
## [1] 2
```

```
sd(trim800$Blue1)
```

```
## [1] 1.258306
```

```
sd(trim800$Blue1d)
```

```
## [1] 1.414214
```

```
mean(lab2$Blue1)
```

```
## [1] 1.604167
```

```
mean(lab2$Blue1d)
```

```
## [1] 2.479167
```

```
sd(lab2$Blue1)
```

```
## [1] 0.8439921
```

```
sd(lab2$Blue1d)
```

```
## [1] 0.8989257
```

```
totalHeartmean <- (sum(lab2$Red1)+sum(lab2$Red1d)+sum(lab2$Red2)+sum(lab2$Red2d)+sum(lab2$Red3)+sum(l
ab2$Red3d)+sum(lab2$Red4)+sum(lab2$Red4d))/(48*8)
totalCancermean <- (sum(lab2$Blue1)+sum(lab2$Blue1d)+sum(lab2$Blue2)+sum(lab2$Blue2d)+sum(lab2$Blue3)
+sum(lab2$Blue3d)+sum(lab2$Blue4)+sum(lab2$Blue4d))/(48*8)
redcontrol1data<- lab2[,c(2)]
reddrug1data <- lab2[,c(10)]
bluecontro1trimdata<- trim800[,c(3)]
bluedrugtrimdata <- trim800[,c(11)]
redcontroltrimdata<- trim800[,c(2)]
reddrugtrimdata <- trim800[,c(10)]
bluecontroldata<- lab2[,c(3)]
bluedrugdata <- lab2[,c(11)]
completeRedcontrol <- lab2[,c(2,4,6,8)]
completeRedDrug <- lab2[,c(10,12,14,16)]
completeBluecontrol <- lab2[,c(3,5,7,9)]
completeBlueDrug <- lab2[,c(11,13,15,17)]
t.test(redcontrol1data, reddrug1data)
```

```
##
##  Welch Two Sample t-test
##
## data:  redcontrol1data and reddrug1data
## t = 5.0179, df = 83.529, p-value = 2.903e-06
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.6413956 1.4836044
## sample estimates:
## mean of x mean of y
##  2.895833  1.833333
```

```
t.test(redcontroltrimdata, reddrugtrimdata)
```

```
##
##  Welch Two Sample t-test
##
## data:  redcontroltrimdata and reddrugtrimdata
## t = 2.8284, df = 6, p-value = 0.03002
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.134886 1.865114
## sample estimates:
## mean of x mean of y
##      3.25      2.25
```

```
t.test(bluecontroldata,bluedrugdata)
```

```
##
##  Welch Two Sample t-test
##
## data:  bluecontroldata and bluedrugdata
## t = -4.9164, df = 93.629, p-value = 3.748e-06
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.2283901 -0.5216099
## sample estimates:
## mean of x mean of y
##  1.604167  2.479167
```

```
t.test(bluecontro1trimdata, bluedrugtrimdata)
```

```
##
##  Welch Two Sample t-test
##
## data:  bluecontro1trimdata and bluedrugtrimdata
## t = -0.7924, df = 5.92, p-value = 0.4587
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -3.073576  1.573576
## sample estimates:
## mean of x mean of y
##      1.25      2.00
```

```
t.test(completeRedcontrol, completeRedDrug)
```

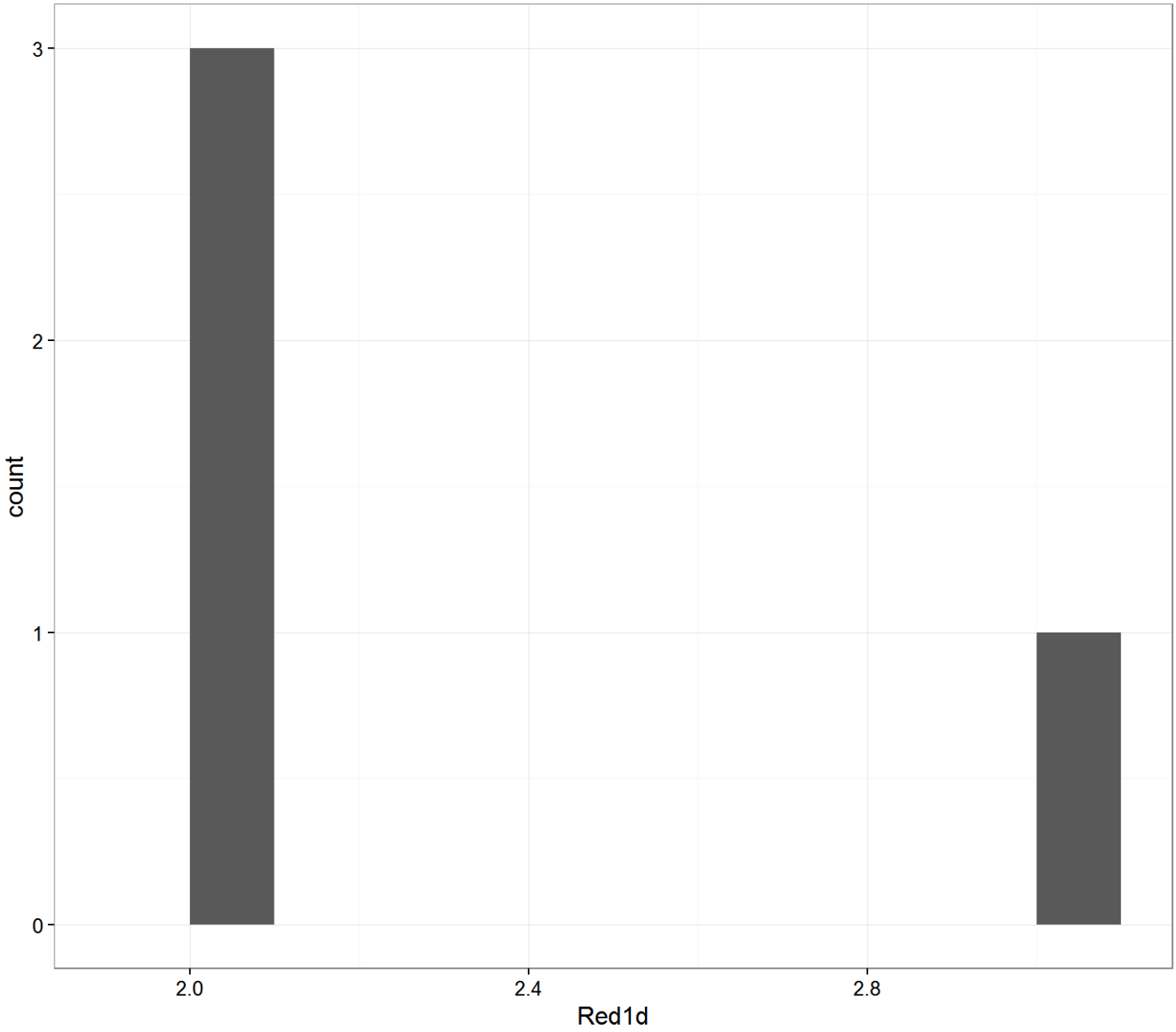
```
##
##  Welch Two Sample t-test
##
## data:  completeRedcontrol and completeRedDrug
## t = 16.5057, df = 343.517, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  1.518523 1.929393
## sample estimates:
## mean of x mean of y
##  2.927083  1.203125
```

```
t.test(completeBluecontrol, completeBlueDrug)
```

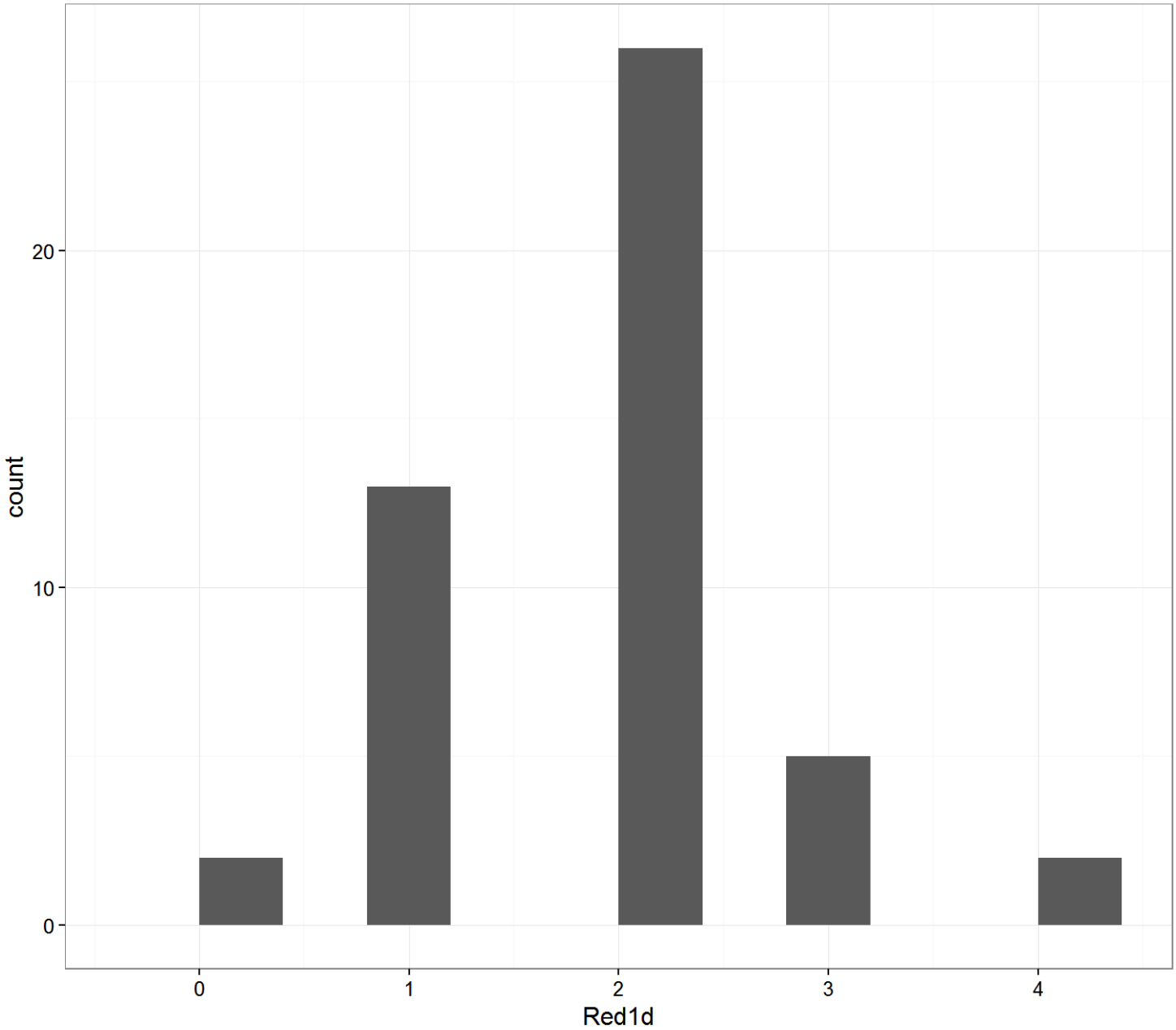
```
##
##  Welch Two Sample t-test
##
## data:  completeBluecontrol and completeBlueDrug
## t = -8.5398, df = 372.821, p-value = 3.464e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.018806 -0.637444
## sample estimates:
## mean of x mean of y
##  1.557292  2.385417
```

Graphs

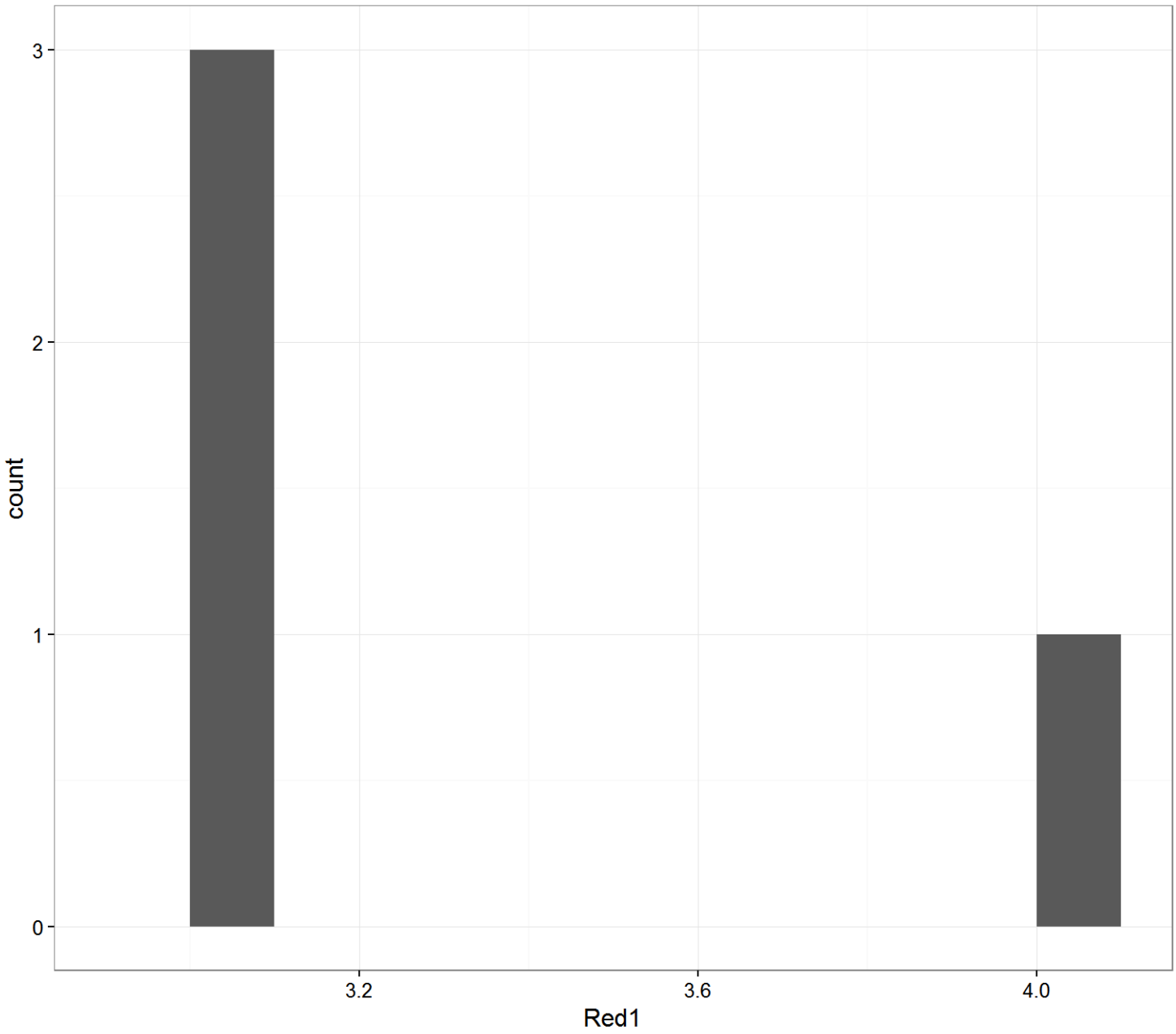
```
ggplot(trim800, aes(Red1d))+geom_histogram(bins = 10)
```



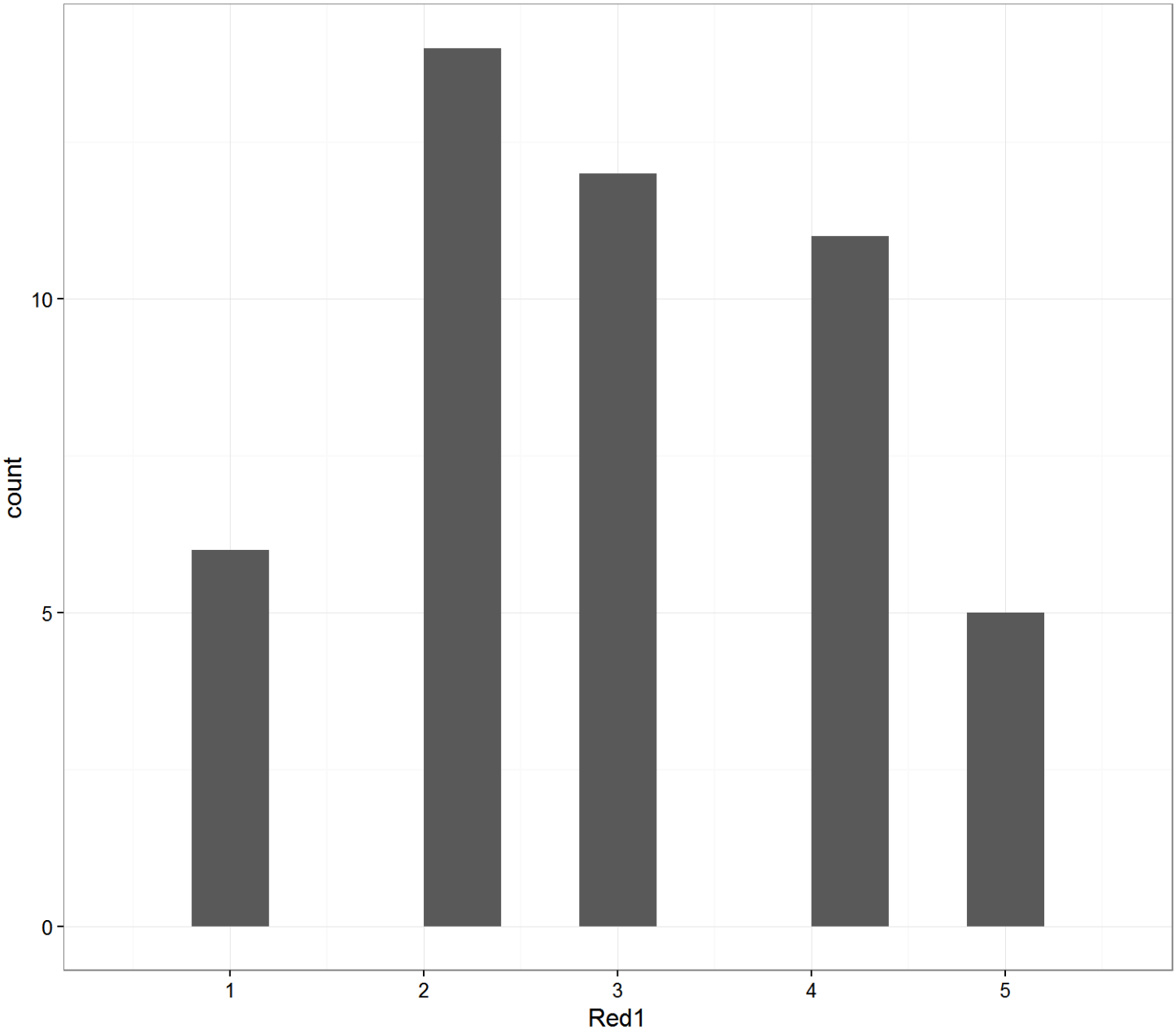

```
ggplot(lab2, aes(Red1d)) +
  geom_histogram(bins = 10)
```




```
ggplot(trim800, aes(Red1)) +
  geom_histogram(bins = 10)
```




```
ggplot(lab2, aes(Red1))+geom_histogram(bins = 10)
```


count
10
5
0
1
2
3
4
5
Red1