arboles_competicion

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4 de febrero de 2019

```
set.seed(42)
datos.train = read.csv('train.csv',na.strings = c("","NA","?"))
datos.test = read.csv('test.csv',na.strings = c("","NA","?"))

datos.train$C = as.factor(datos.train$C)
head(datos.train)
```

```
##         X1        X2        X3       X4      X5       X6       X7       X8
## 1 323.9674  94.76184  7601.661 17.43092 3.58892  8.20679 48.27033 56.22210
## 2 449.3101 462.88719  1336.392 18.58632 0.00000  6.68945 78.67518 48.38066
## 3 338.3651 114.61964  8569.328 12.68633 1.49662  9.73201 84.96591 60.27255
## 4 317.6960  72.96405 10123.749 20.86091 0.76987  6.95527 51.26486 54.17935
## 5 292.8339 100.54887 13984.575 24.02387 0.41317  0.66362 94.73769 62.35841
## 6 344.2955  59.43163  8684.685 20.37674 0.17358 12.49976 52.77030 56.37404
##         X9      X10      X11        X12      X13      X14       X15
## 1 254.7687  8.19803 351.0934 18157.9020 44.90782 50.16576 133.71855
## 2 279.8185  8.32540 329.4143 10118.2290 55.62766 39.80934  95.15376
## 3 233.3270 10.57056 314.0604 10930.6843 31.63738 48.66554 169.62383
## 4 231.3225 11.18842 290.2030 19942.5180 57.71319 24.70262 133.62678
## 5 254.4782 11.04849 289.1479   365.7034 20.76044  6.38230 170.15400
## 6 226.2117 11.53128 287.3450 25190.3820 38.85749  6.55058 137.14026
##        X16      X17       X18      X19       X20        X21      X22
## 1 58969.75 24.16711  163.7963 16.09225  60.30676  -85.90293 21.53359
## 2 15985.78  4.27151  434.5565 19.52196 129.05139 -149.91768 15.14633
## 3 57551.55 20.76834 1182.4510 15.79509  83.16696 -167.18141 21.71627
## 4 64942.52 26.58239  859.1466 16.93722  60.13667   -4.03230 24.73222
## 5 49855.12 30.99266 6051.1068 29.95511  30.59322   70.26063 24.99698
## 6 75563.97 37.66061  318.1279 17.61887  19.03503   56.17124 22.47923
##        X23      X24      X25        X26       X27       X28      X29
## 1 4351.913 244.5429 34.14796 -119.33412 11076.846 125.09562 11.21443
## 2 2480.405 116.7880 34.12381 -272.19258  4712.914 113.49741  8.86505
## 3 4949.660 174.3706 30.12851 -130.93311  6898.235 112.72539 11.21806
## 4 4981.448 283.1153 32.93729   -7.02648 11624.361 117.37245 10.41086
## 5 1586.331 424.0402 20.45429  154.38474  8195.613  94.12014 12.53771
## 6 4722.291 343.2226 33.00380   21.79669 12069.549 120.39051 12.15221
##          X30      X31      X32       X33      X34     X35      X36
## 1   -8.28483 485.1093 66.01941 117.29586 17367.85 2.82278 18.19565
## 2 -110.03499 674.4543 44.43959 222.03303 30782.62 6.71820 21.64578
## 3  -29.91607       NA 50.63509 125.45153 31219.73 7.28399 21.18900
## 4   -2.30434 628.7873 79.05813  63.21332 25200.80 3.84604 21.46721
## 5  -67.13472 339.9319 64.91334  49.10972 30690.72 5.98271 17.59817
## 6   -4.09576 540.7530 82.58541  26.68527 17057.01 3.75791 20.25012
##         X37        X38       X39      X40       X41        X42       X43
## 1 -13.34136 -150.33513 120.45951  6.48293 14144.310   466.8112 -44.20340
## 2  12.69200  -60.60256  39.67604 15.94169  6930.222 -3381.6624 160.88730
## 3  -5.14208 -123.70124  84.71056  8.99144  9026.467 -3020.7643  62.15407
## 4 -19.70385 -227.10660  91.45122  6.04328 10979.970  -526.1491  66.23979
```

```
## 5 114.86430 -224.28105  72.16020  2.32580  6131.878 -1152.8796  64.38963
## 6  16.40965 -301.53897 111.19350  4.55499 12405.510 -1216.7184 -18.13120
##        X44     X45      X46       X47       X48       X49      X50 C
## 1 666.1363 2.19966  9.94987 -62.69354 150.12330 127.90047 14.53285 1
## 2 911.4417 1.34634 23.35195 -47.08098 214.28433 -23.48208 11.91182 0
## 3 519.6927 1.62057 17.26532 -37.35366 158.80865  73.30240 11.14842 0
## 4 336.9091 0.00000 11.83260  23.07519 315.42936 131.48778 16.87637 1
## 5 384.6736 0.00000  4.57674  41.41753  88.75677  76.53342 22.05937 0
## 6 245.2826 0.00000  8.24736  14.08021 169.40397 151.25490 17.57754 0
```

```
menor.que = function(data,indice){
  menores = which( data[,indice] < -60000 )
}
datos.minimos = sapply(1:50, menor.que, data=datos.train)
datos.minimos
```

```
## [[1]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6443 6702 7108 7136 7429
## [29] 7582 7654
##
## [[2]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[3]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[4]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[5]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[6]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[7]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[8]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
```

```
##
## [[9]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5754 5942 6039 6443 6702 7108 7136 7429
## [29] 7582 7654
##
## [[10]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[11]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[12]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[13]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[14]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[15]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[16]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[17]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[18]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[19]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
```

```
## [29] 7429 7582 7654
##
## [[20]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[21]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[22]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[23]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[24]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[25]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[26]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[27]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[28]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[29]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[30]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
```

```
## [15] 3078 3960 4197 4230 4990 5629 5754 5942 6039 6443 6702 7108 7136 7429
## [29] 7582 7654
##
## [[31]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[32]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[33]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[34]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[35]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[36]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[37]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[38]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[39]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[40]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[41]]
```

```
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[42]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[43]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[44]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[45]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[46]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[47]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[48]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[49]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
##
## [[50]]
##  [1]  395  545  772 1051 1242 1308 1365 1698 1919 1983 2042 2342 2674 2995
## [15] 3078 3960 4197 4230 4990 5282 5629 5754 5942 6039 6443 6702 7108 7136
## [29] 7429 7582 7654
```

```
#head(datos.train[datos.minimos[[2]],],20)
#tail(datos.train[datos.minimos[[2]],],-12)
```

```
datos.train = datos.train[-as.vector(datos.minimos[[2]]),]
datos.minimos = sapply(1:50, menor.que, data=datos.train)
```

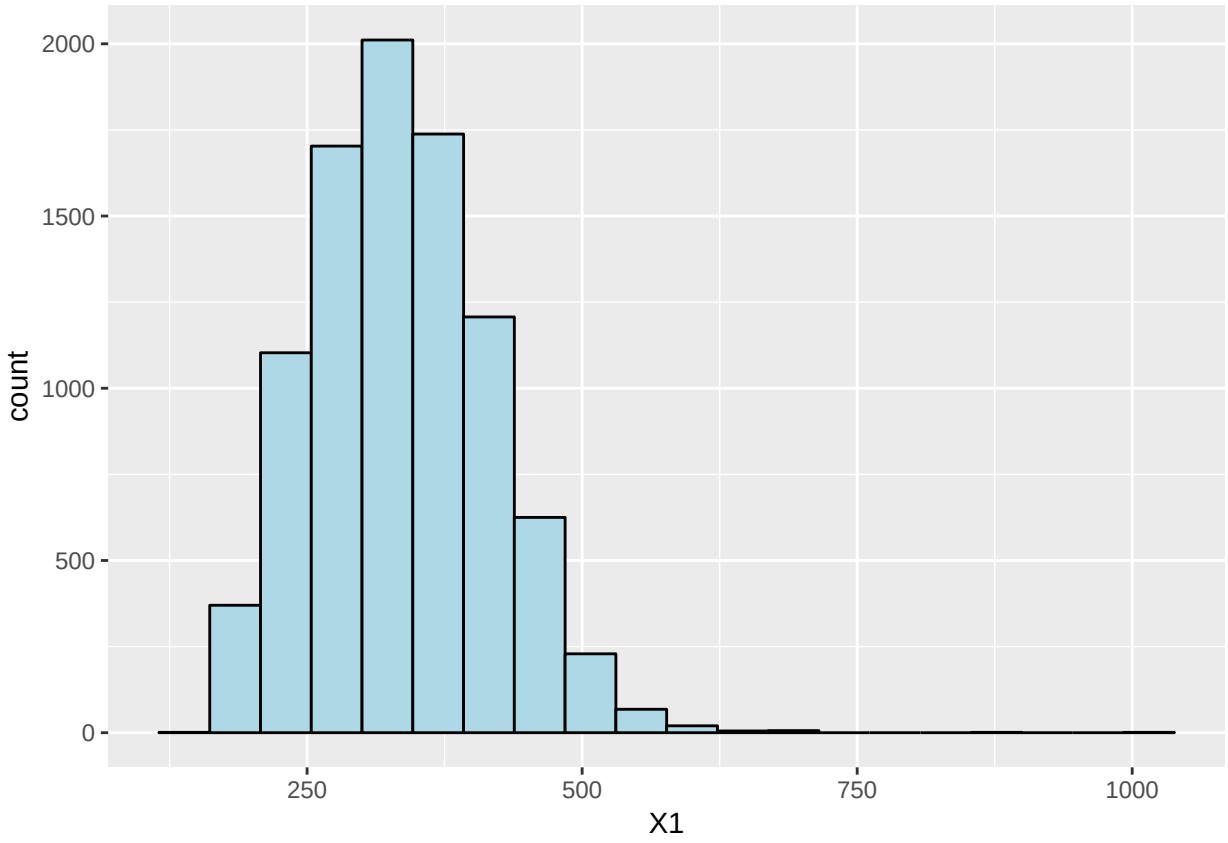
```r
library(ggplot2)
histogram_by = function(datos,var, bins=20){

  ggplot(datos,aes_string(x=var)) +
        geom_histogram(fill='lightblue', color="black", bins=bins)
}


lapply(names(datos.train)[1:50],histogram_by,datos=datos.train)
```

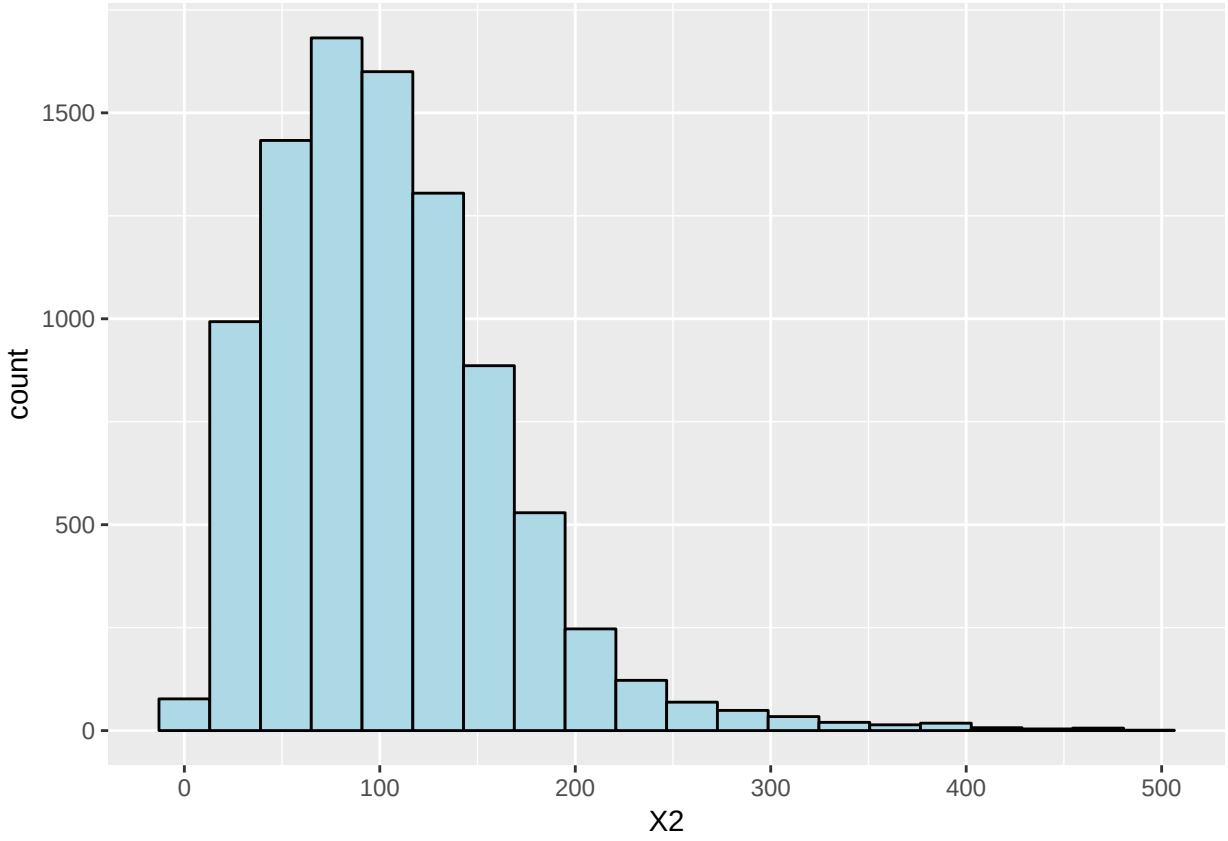
```
## [[1]]
```

```
## Warning: Removed 25 rows containing non-finite values (stat_bin).
```



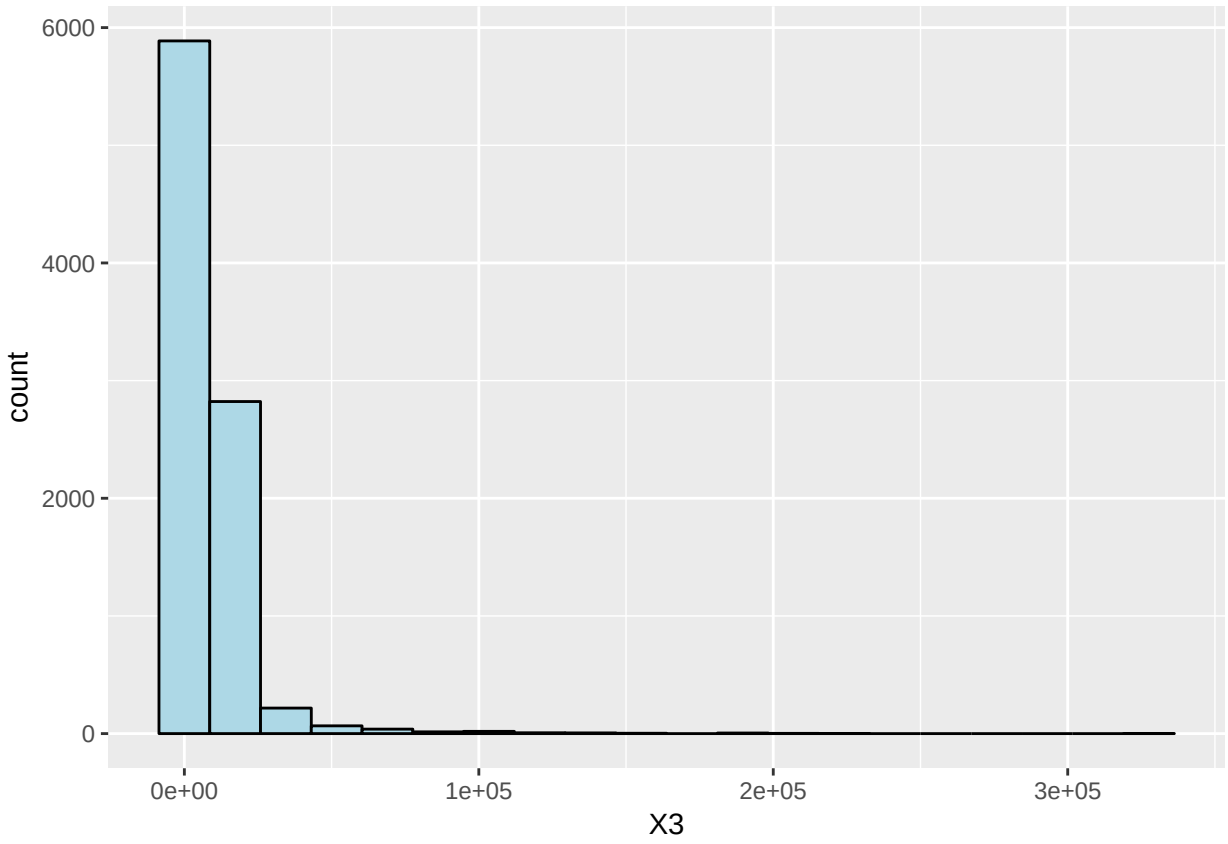

```
##
## [[2]]
```

```
## Warning: Removed 17 rows containing non-finite values (stat_bin).
```



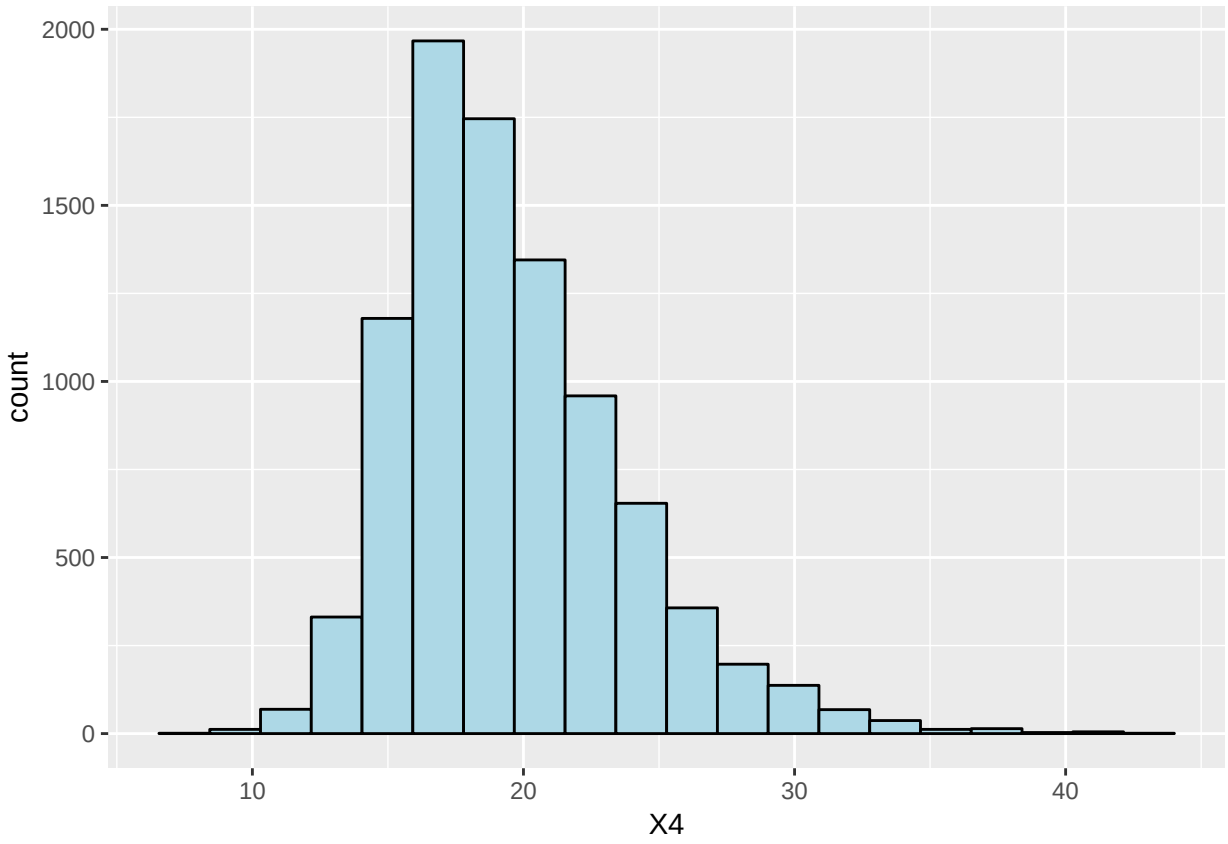

```
##
## [[3]]
```

```
## Warning: Removed 24 rows containing non-finite values (stat_bin).
```



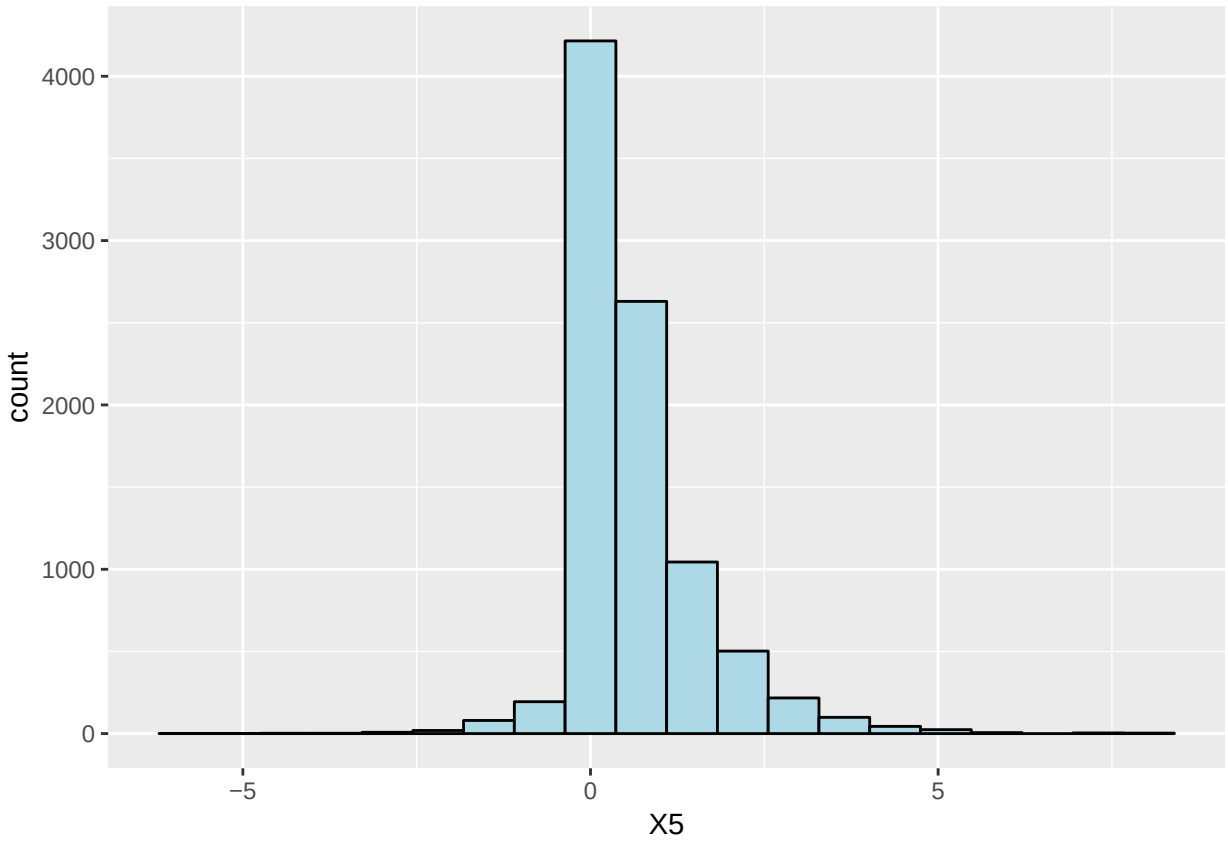

```
##
## [[4]]
```

```
## Warning: Removed 19 rows containing non-finite values (stat_bin).
```



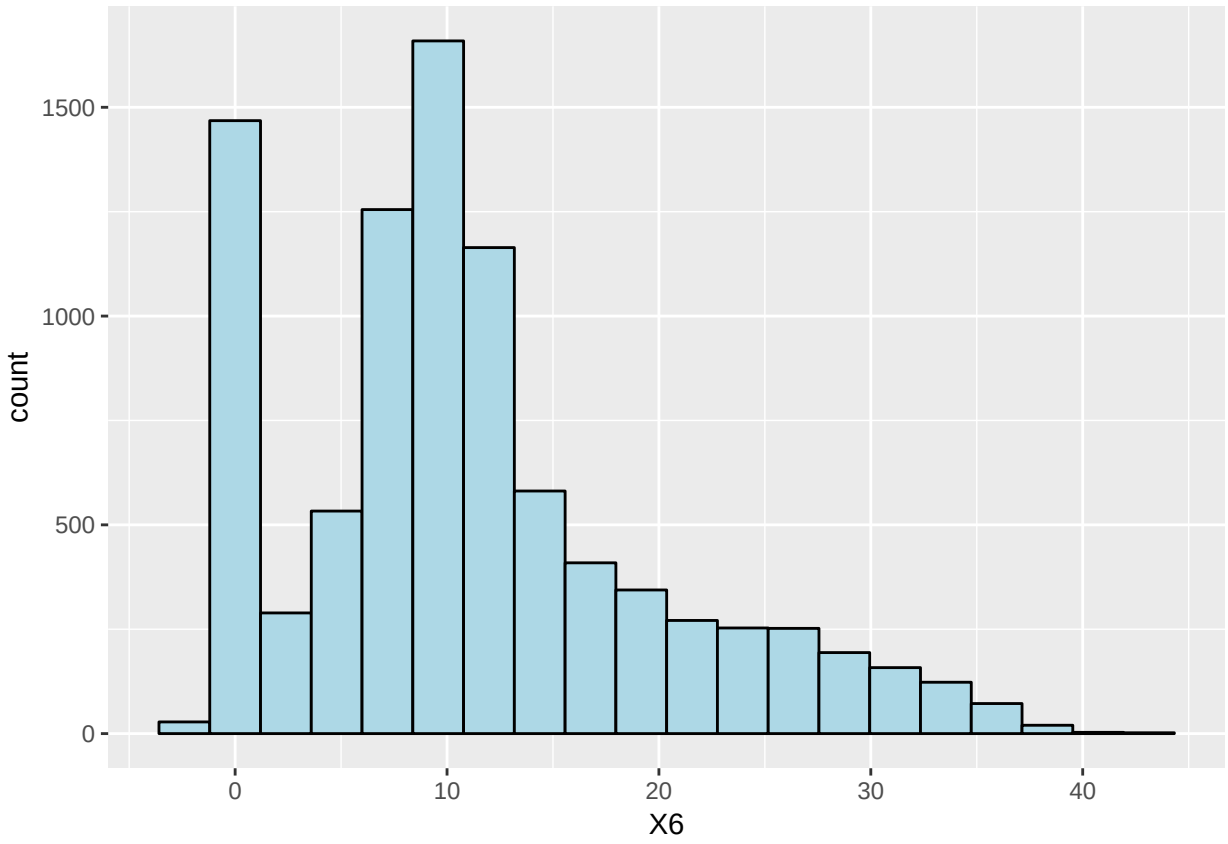

```
##
## [[5]]
```

```
## Warning: Removed 18 rows containing non-finite values (stat_bin).
```



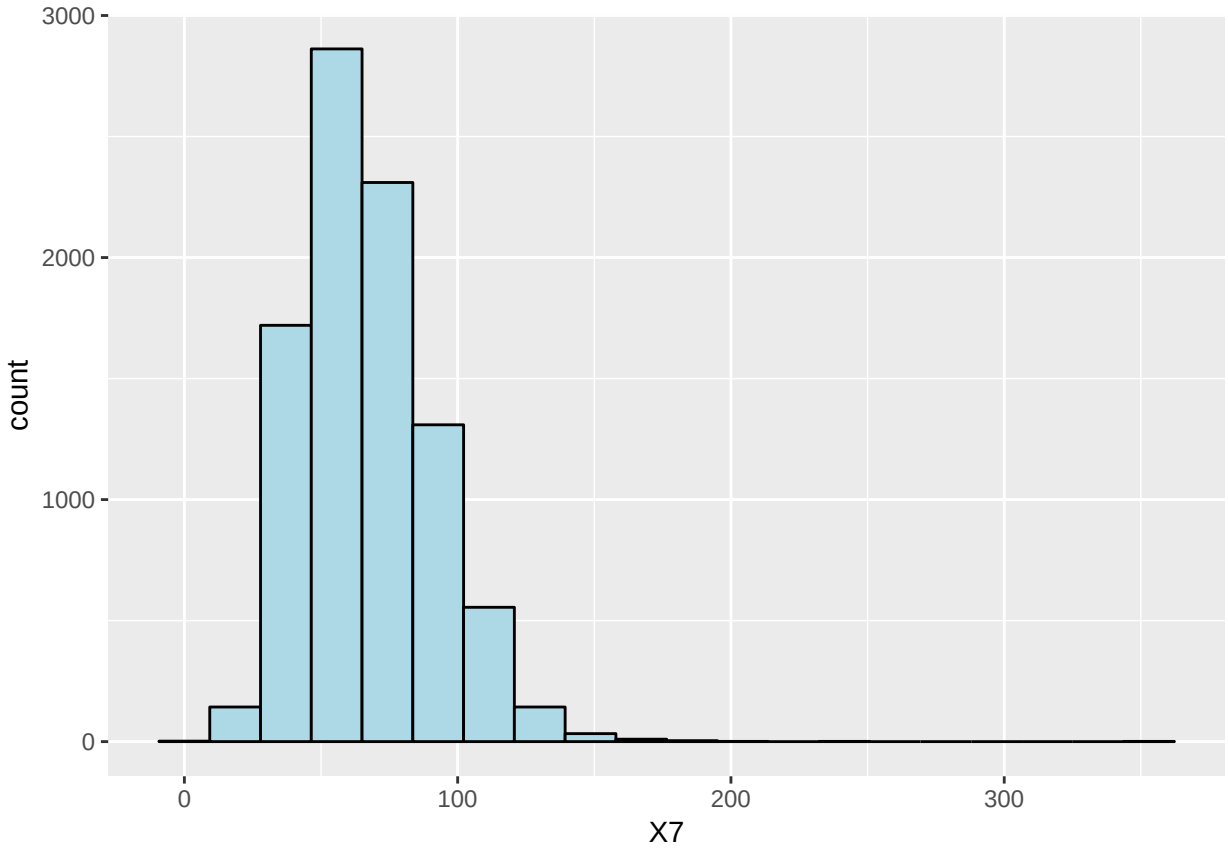

```
##
## [[6]]
```

```
## Warning: Removed 35 rows containing non-finite values (stat_bin).
```



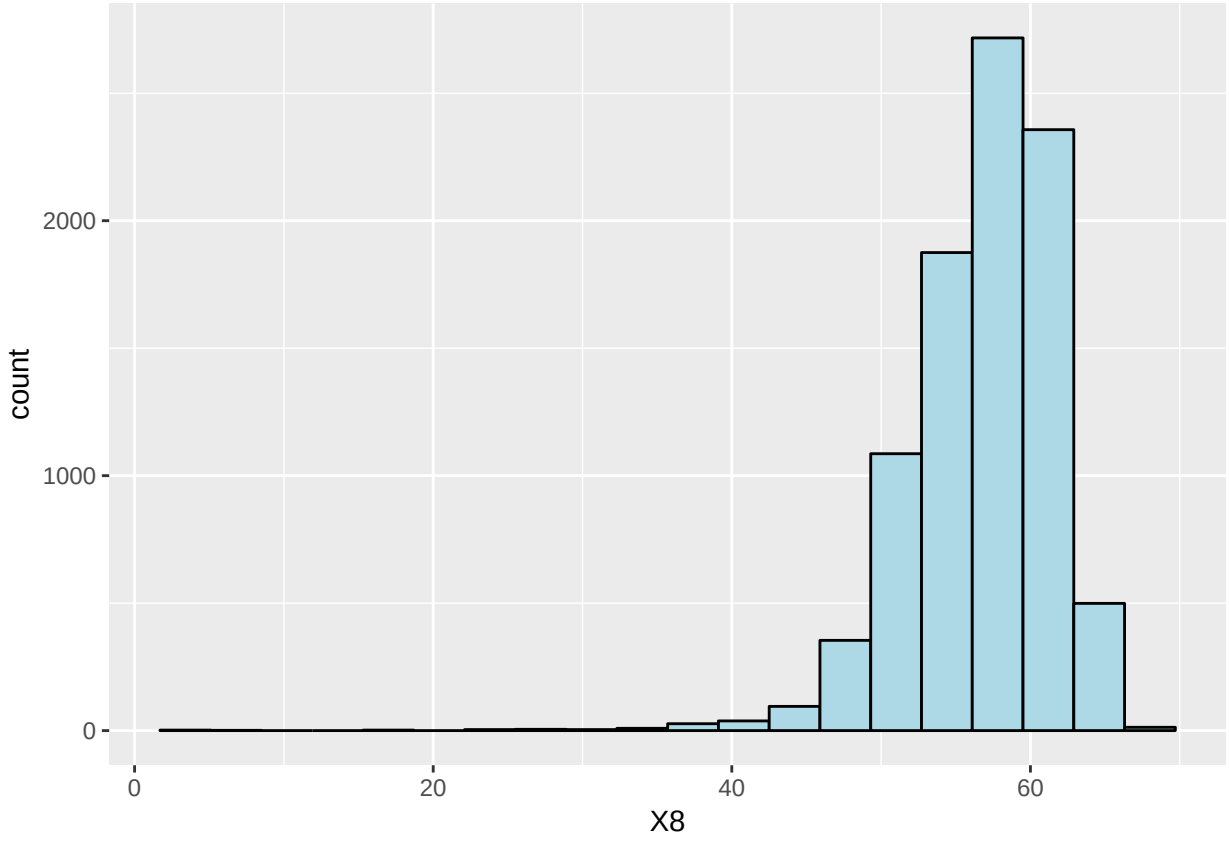

```
##
## [[7]]
```

```
## Warning: Removed 19 rows containing non-finite values (stat_bin).
```



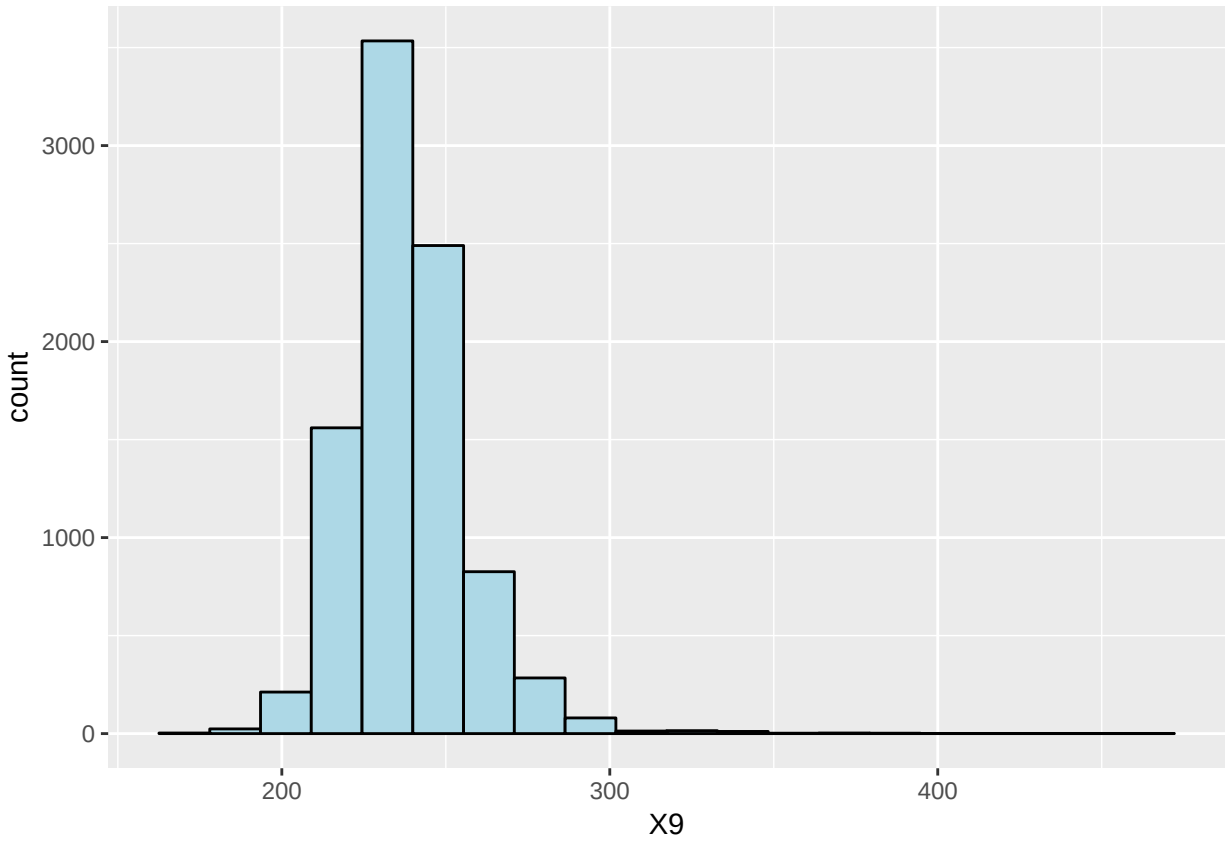

```
##
## [[8]]
```

```
## Warning: Removed 25 rows containing non-finite values (stat_bin).
```



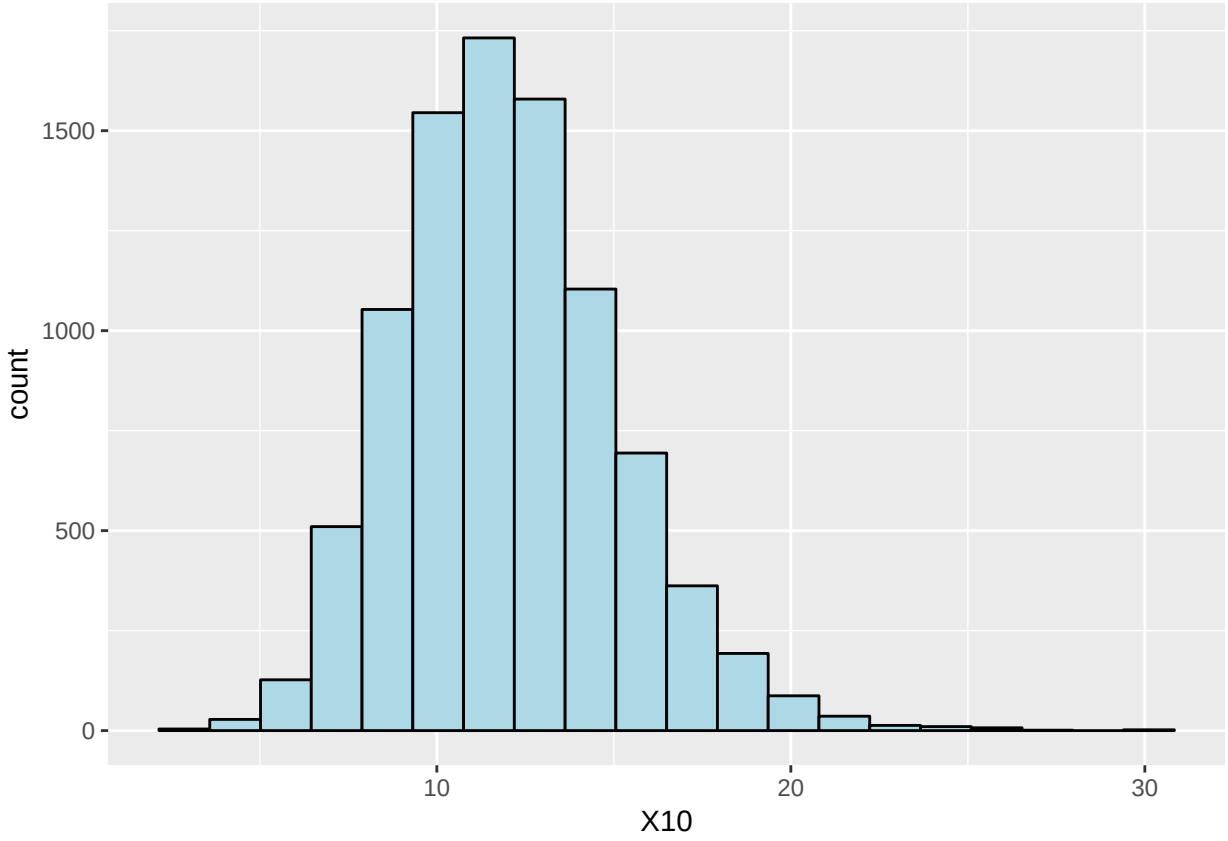

```
##
## [[9]]
```

```
## Warning: Removed 49 rows containing non-finite values (stat_bin).
```



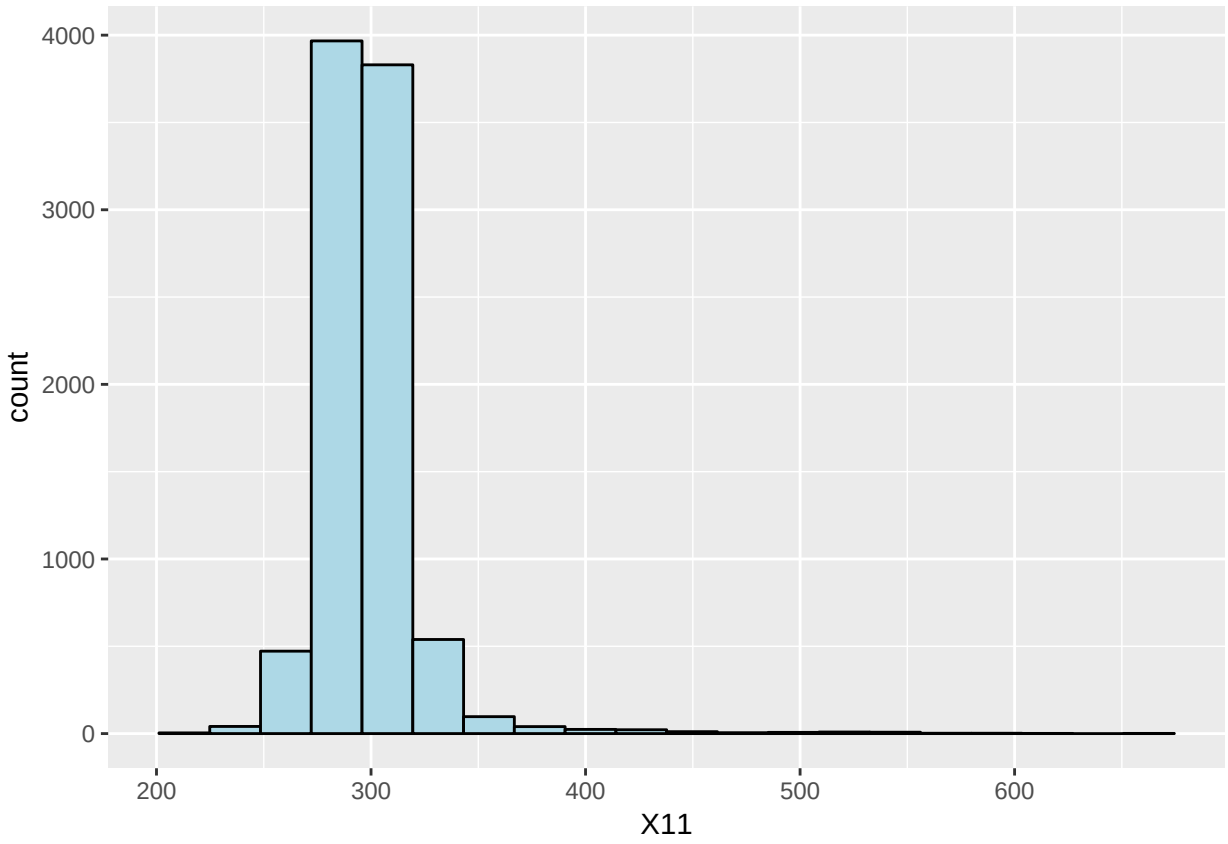

```
##
## [[10]]
```

```
## Warning: Removed 26 rows containing non-finite values (stat_bin).
```



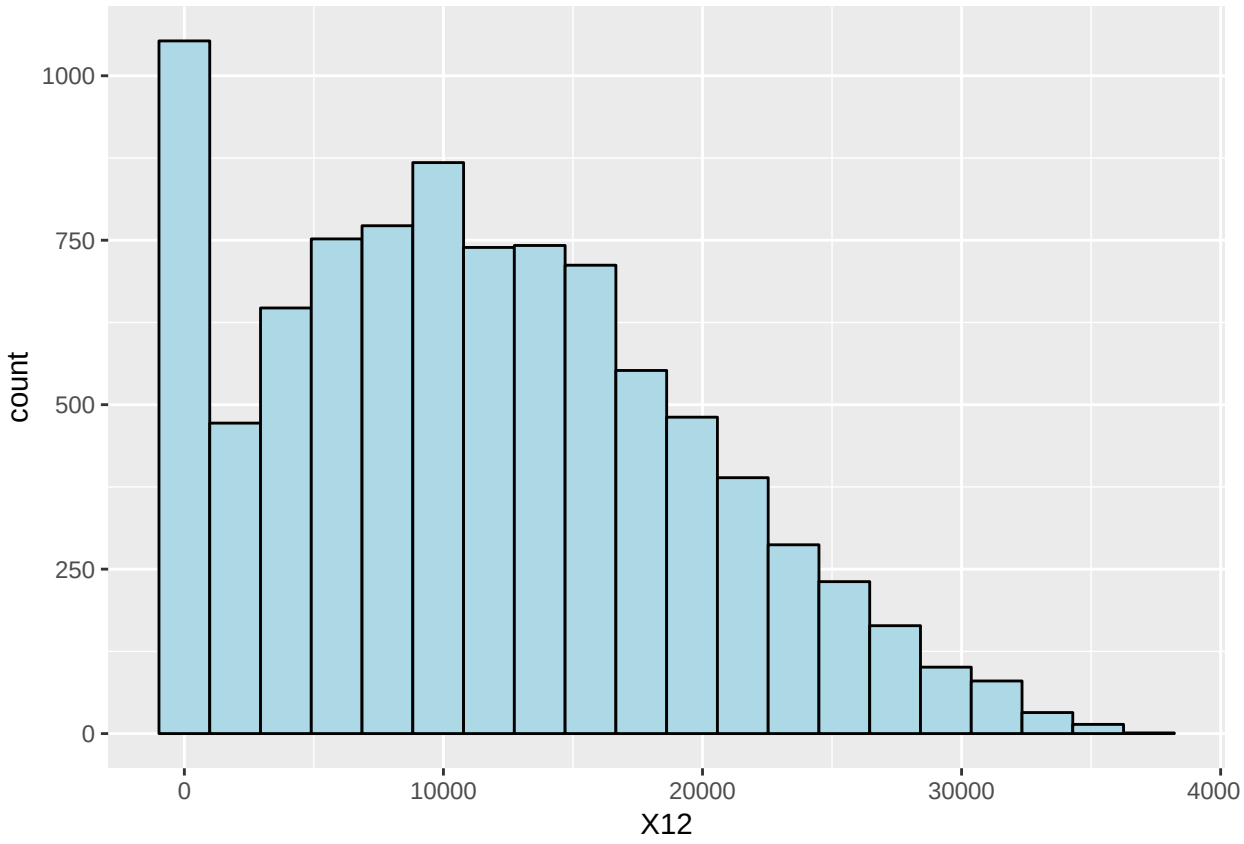

```
##
## [[11]]
```

```
## Warning: Removed 31 rows containing non-finite values (stat_bin).
```



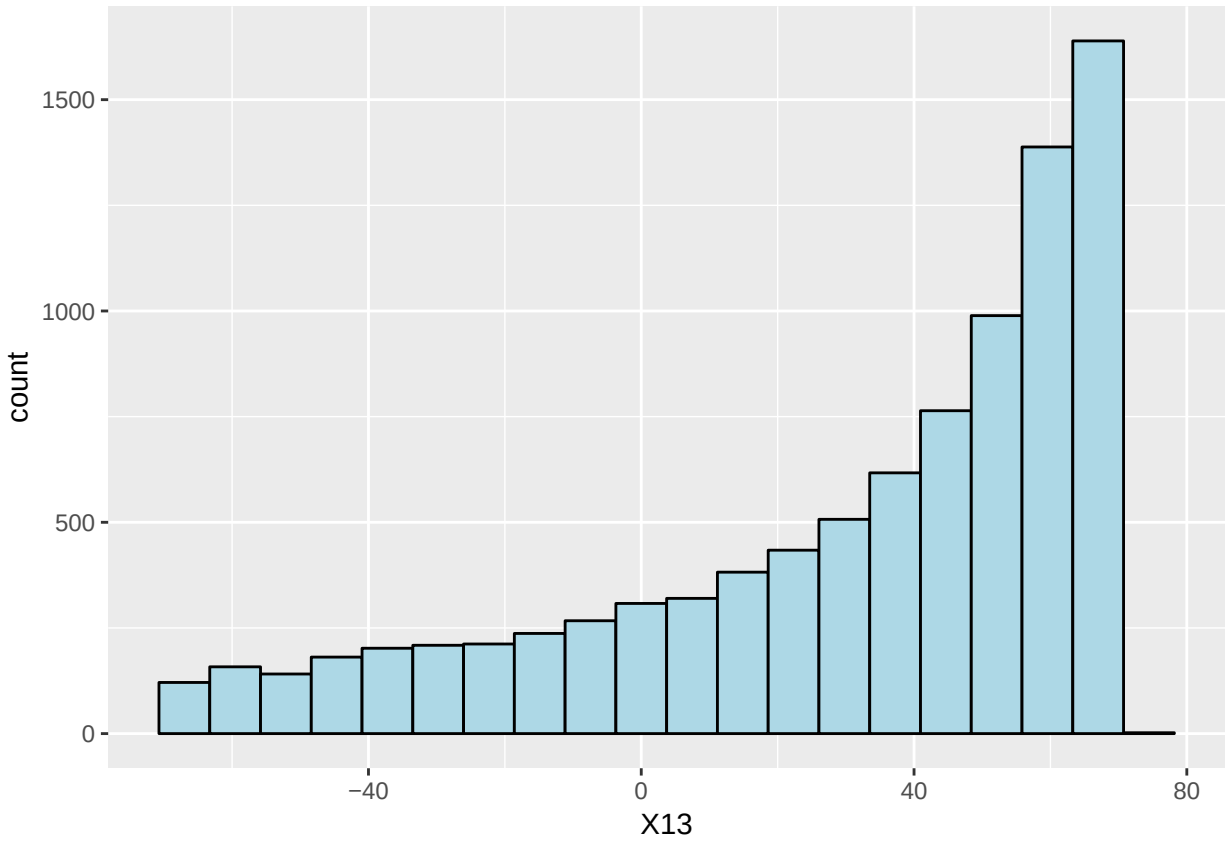

```
##
## [[12]]
```

```
## Warning: Removed 24 rows containing non-finite values (stat_bin).
```



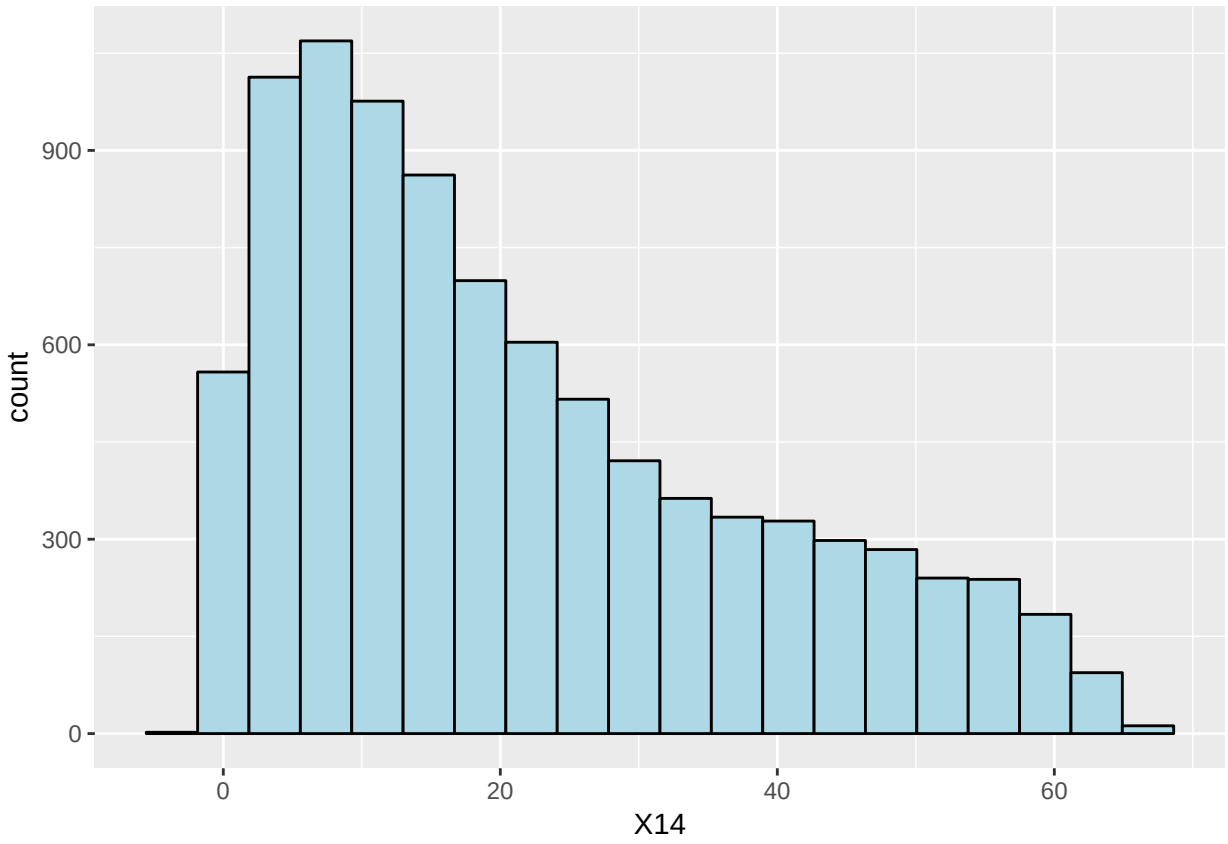

```
##
## [[13]]
```

```
## Warning: Removed 35 rows containing non-finite values (stat_bin).
```



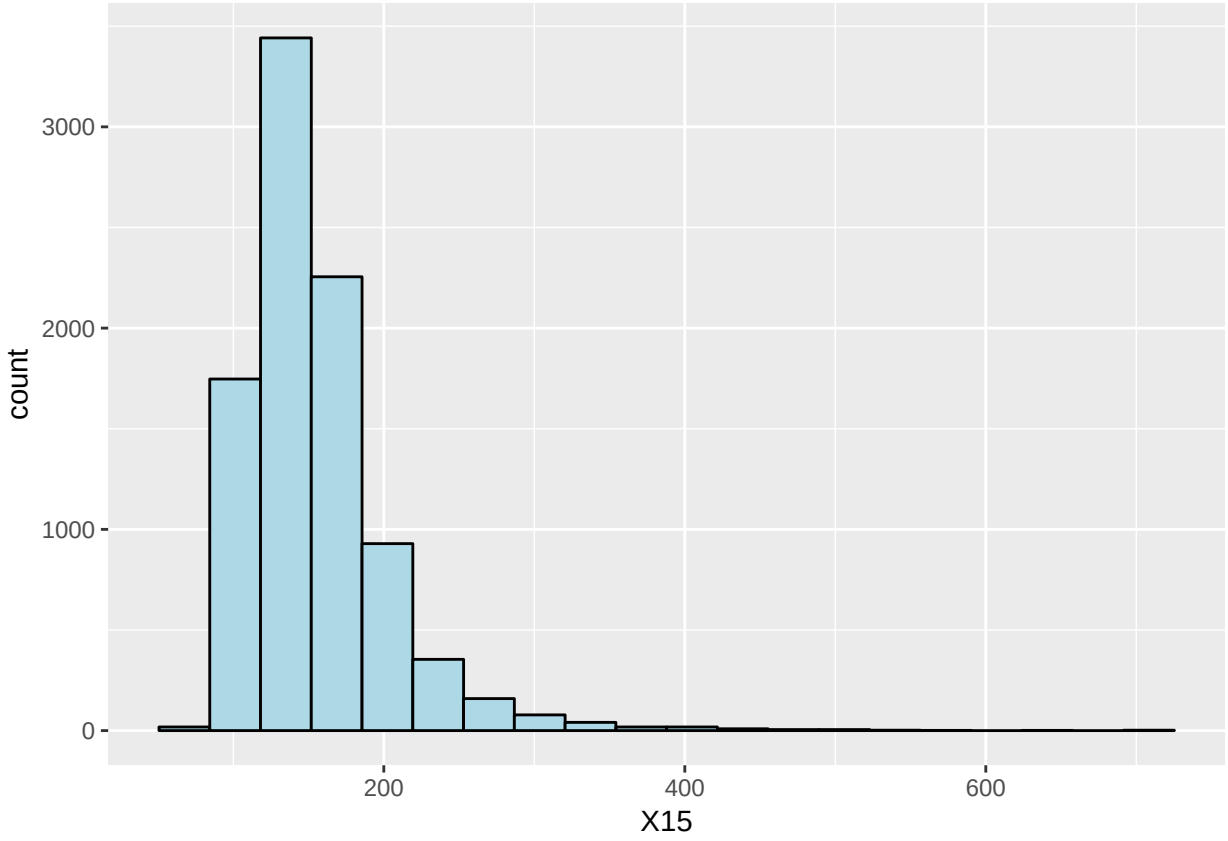

```
##
## [[14]]
```

```
## Warning: Removed 18 rows containing non-finite values (stat_bin).
```



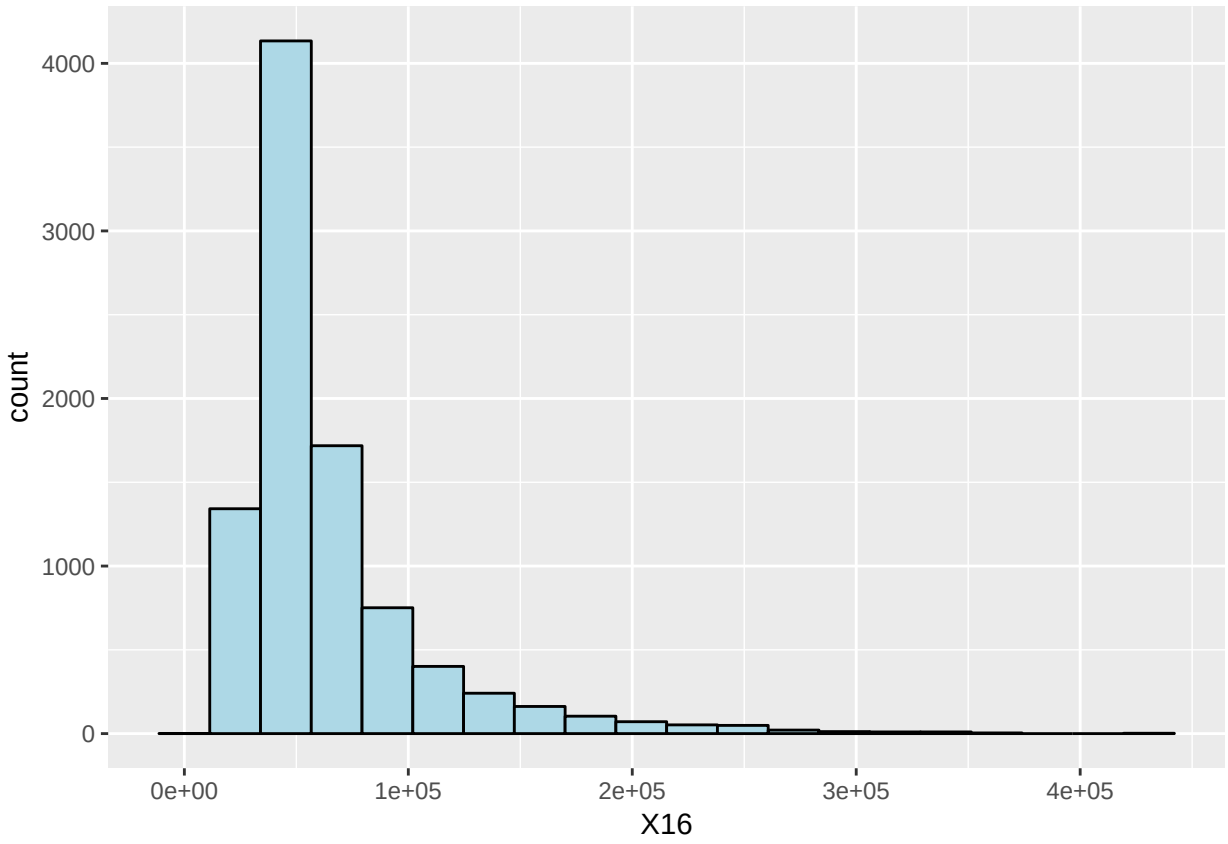

```
##
## [[15]]
```

```
## Warning: Removed 29 rows containing non-finite values (stat_bin).
```



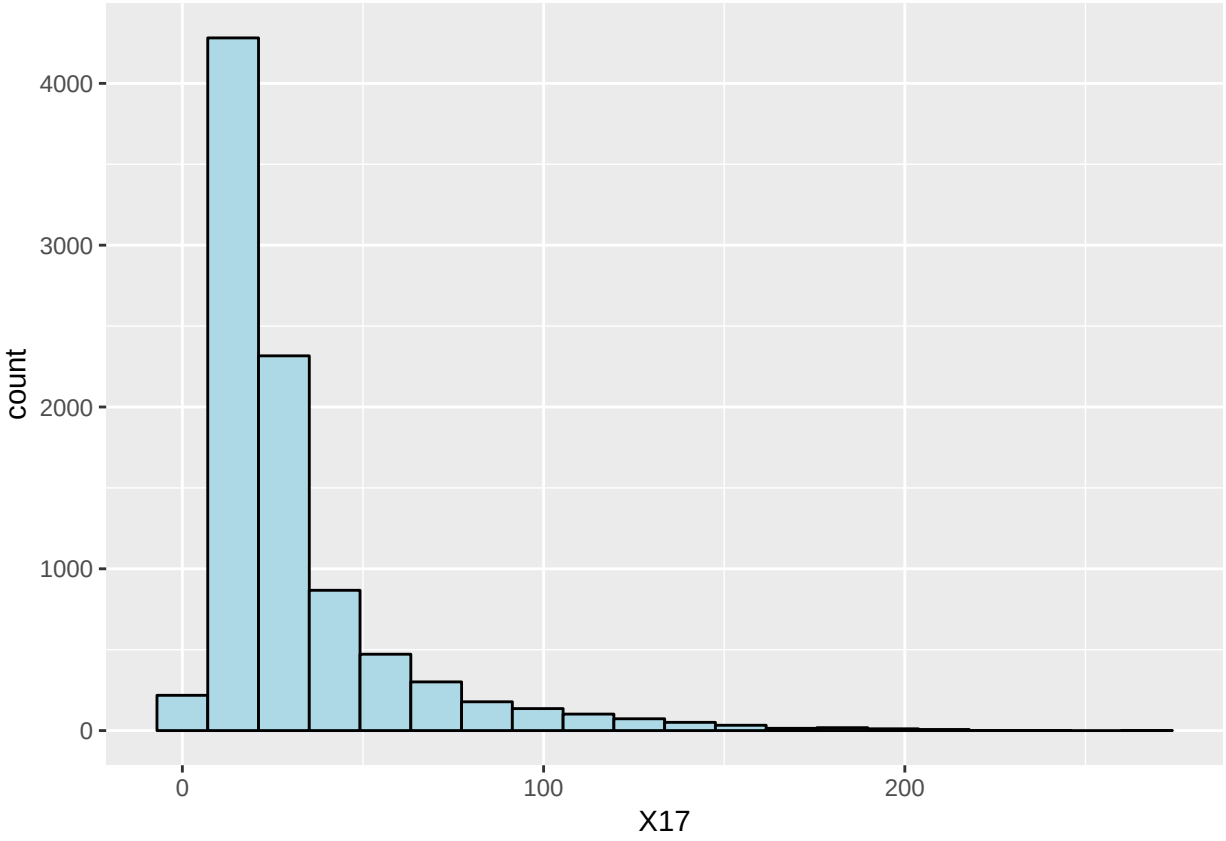

```
##
## [[16]]
```

```
## Warning: Removed 28 rows containing non-finite values (stat_bin).
```



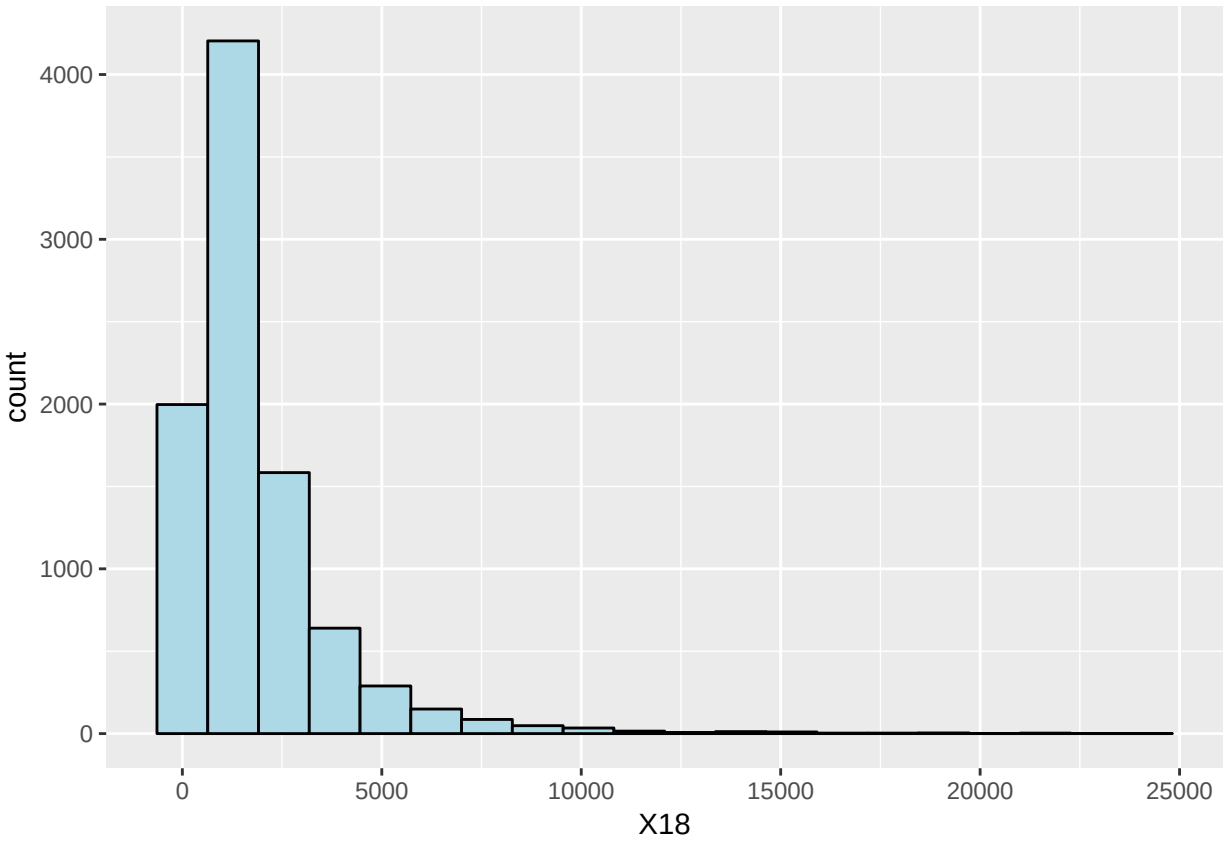

```
##
## [[17]]
```

```
## Warning: Removed 32 rows containing non-finite values (stat_bin).
```



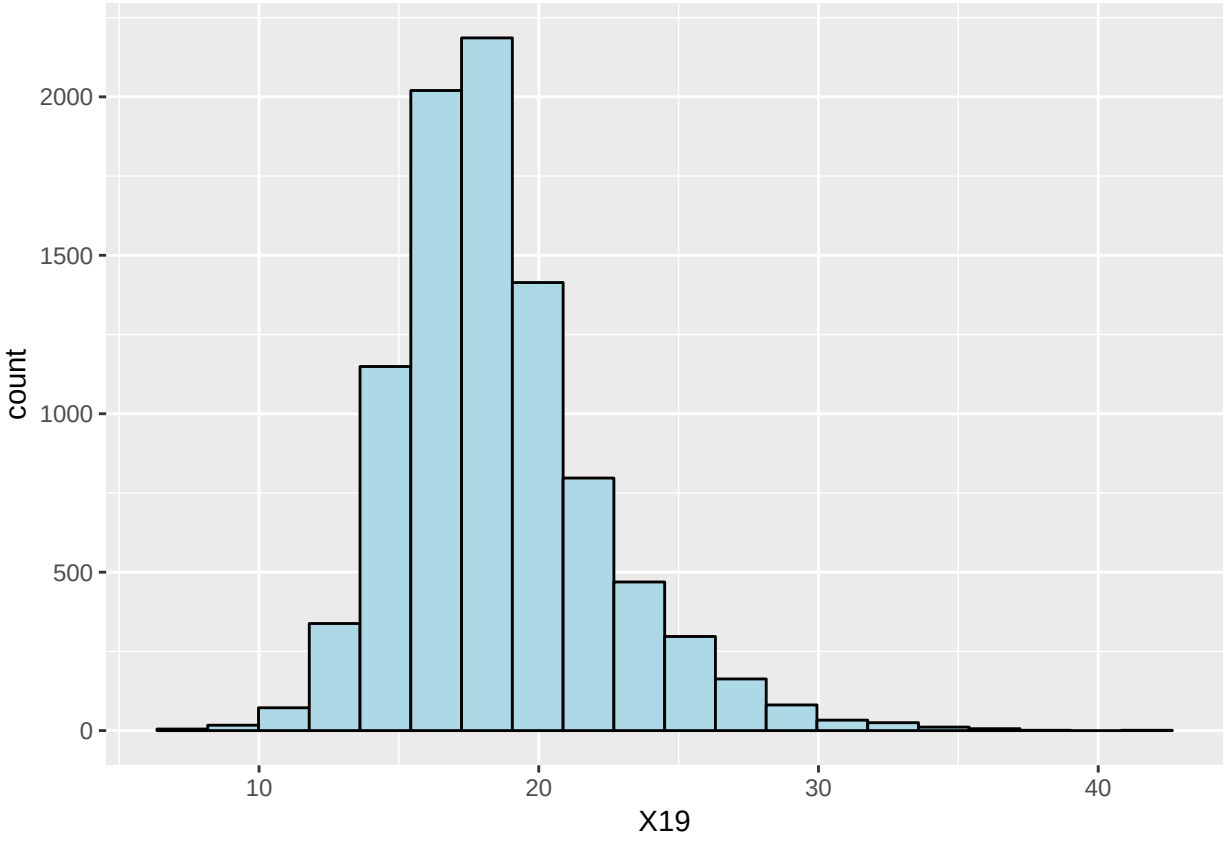

```
##
## [[18]]
```

```
## Warning: Removed 22 rows containing non-finite values (stat_bin).
```



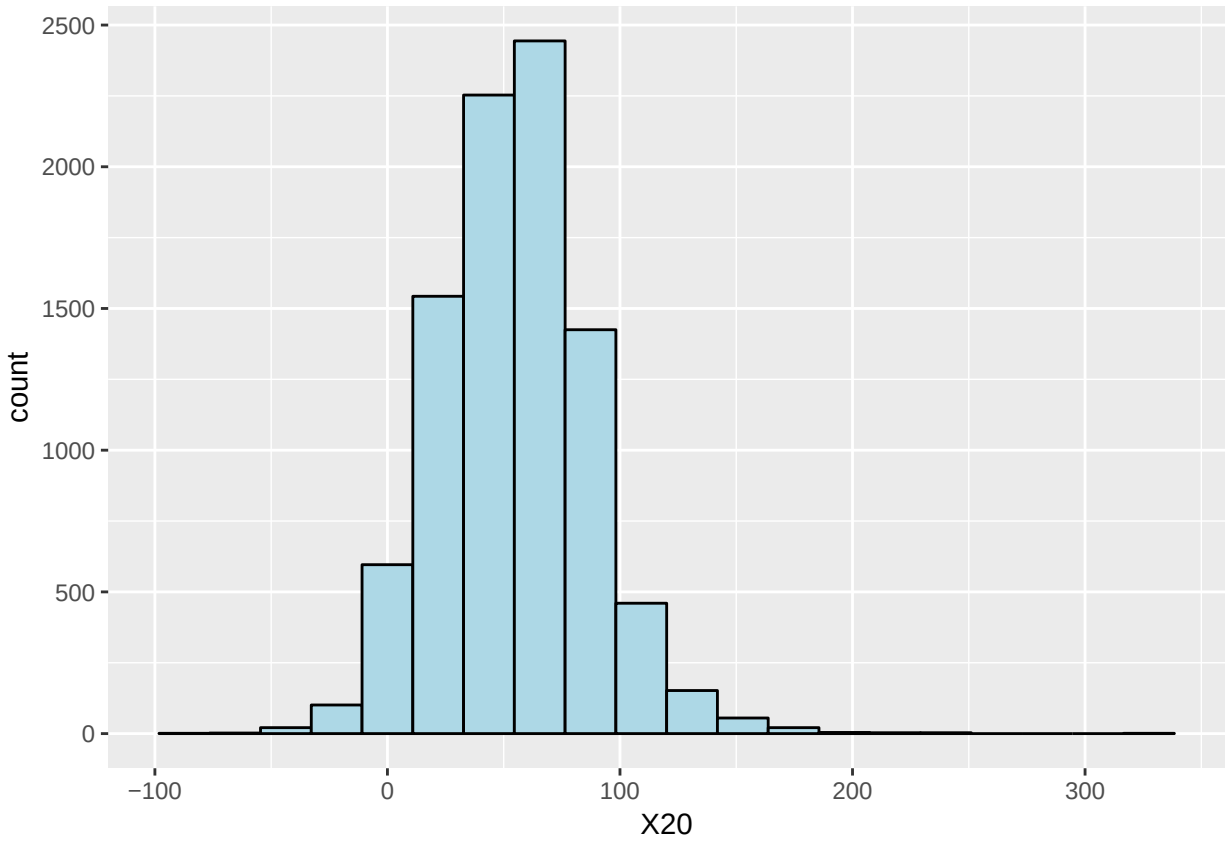

```
##
## [[19]]
```

```
## Warning: Removed 28 rows containing non-finite values (stat_bin).
```



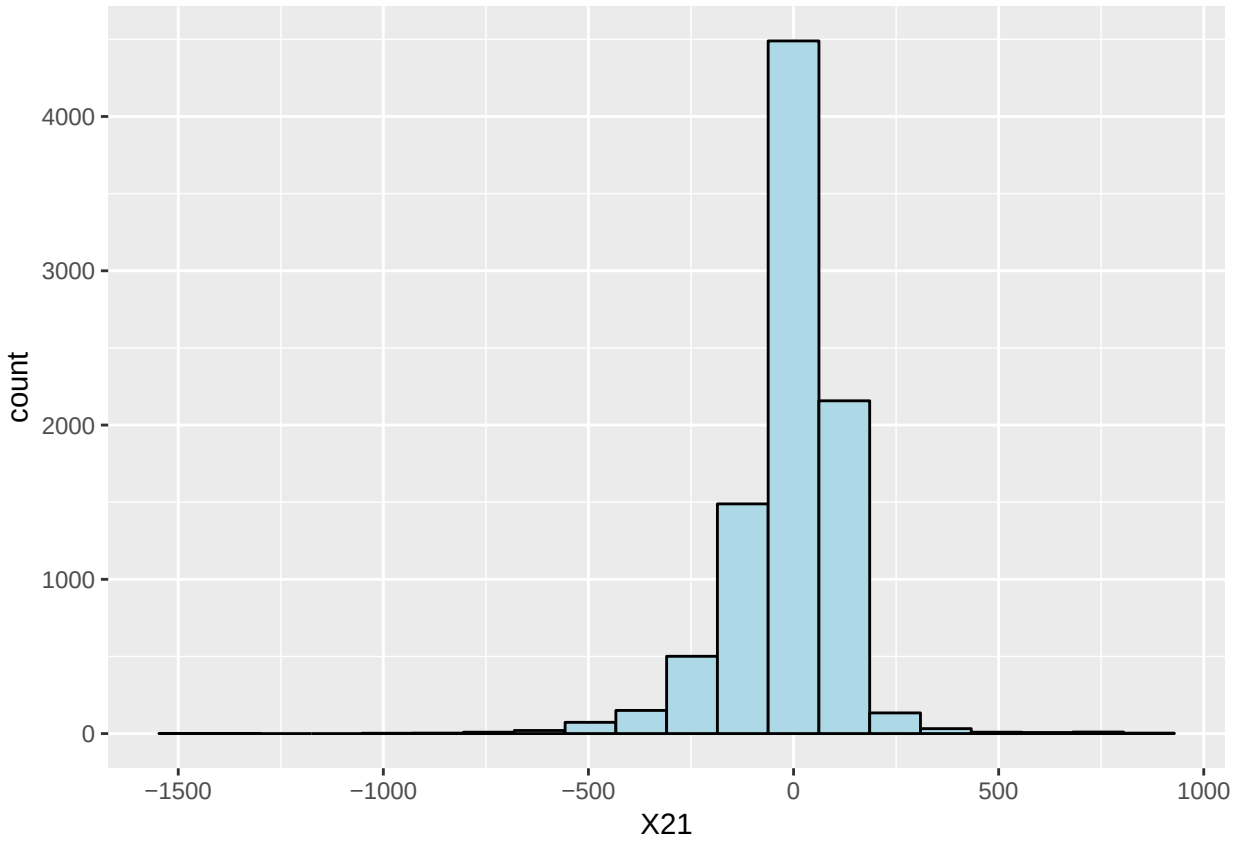

```
##
## [[20]]
```

```
## Warning: Removed 28 rows containing non-finite values (stat_bin).
```



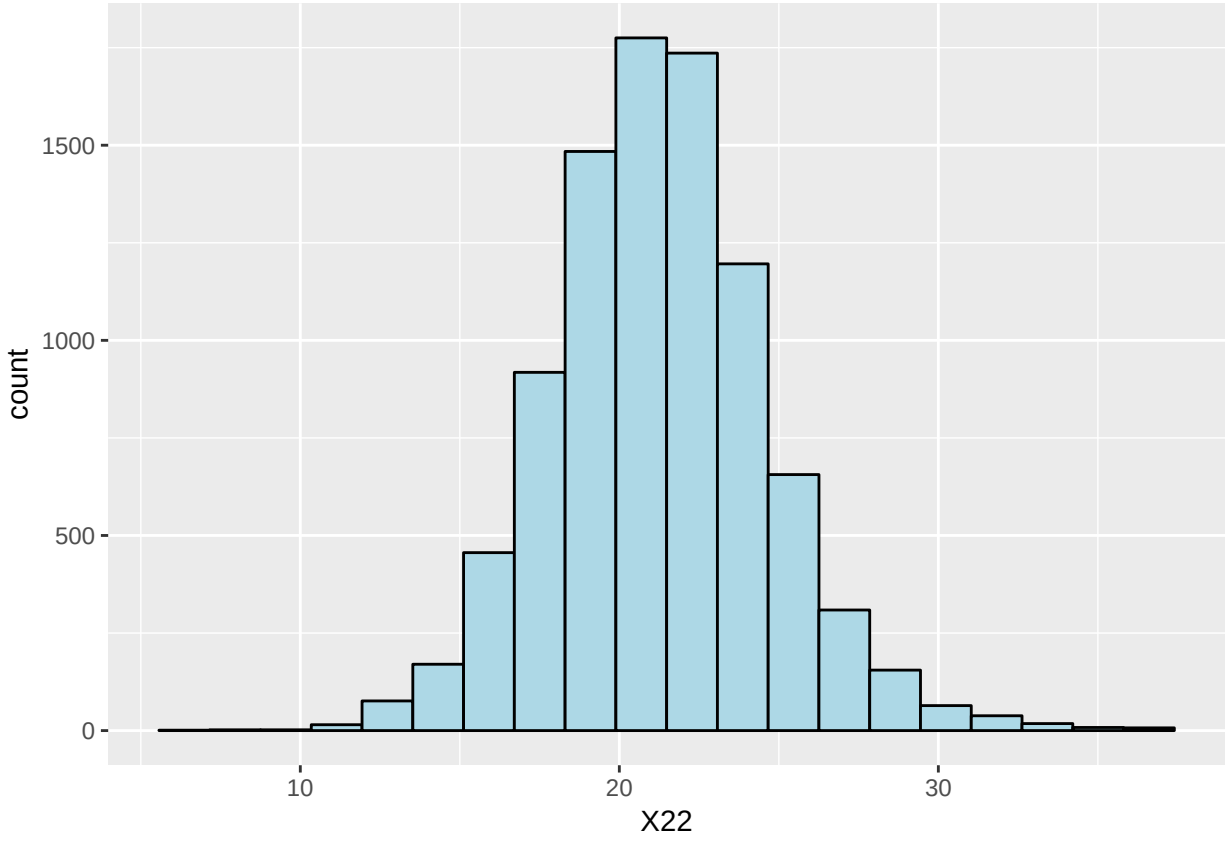

```
##
## [[21]]
```

```
## Warning: Removed 22 rows containing non-finite values (stat_bin).
```



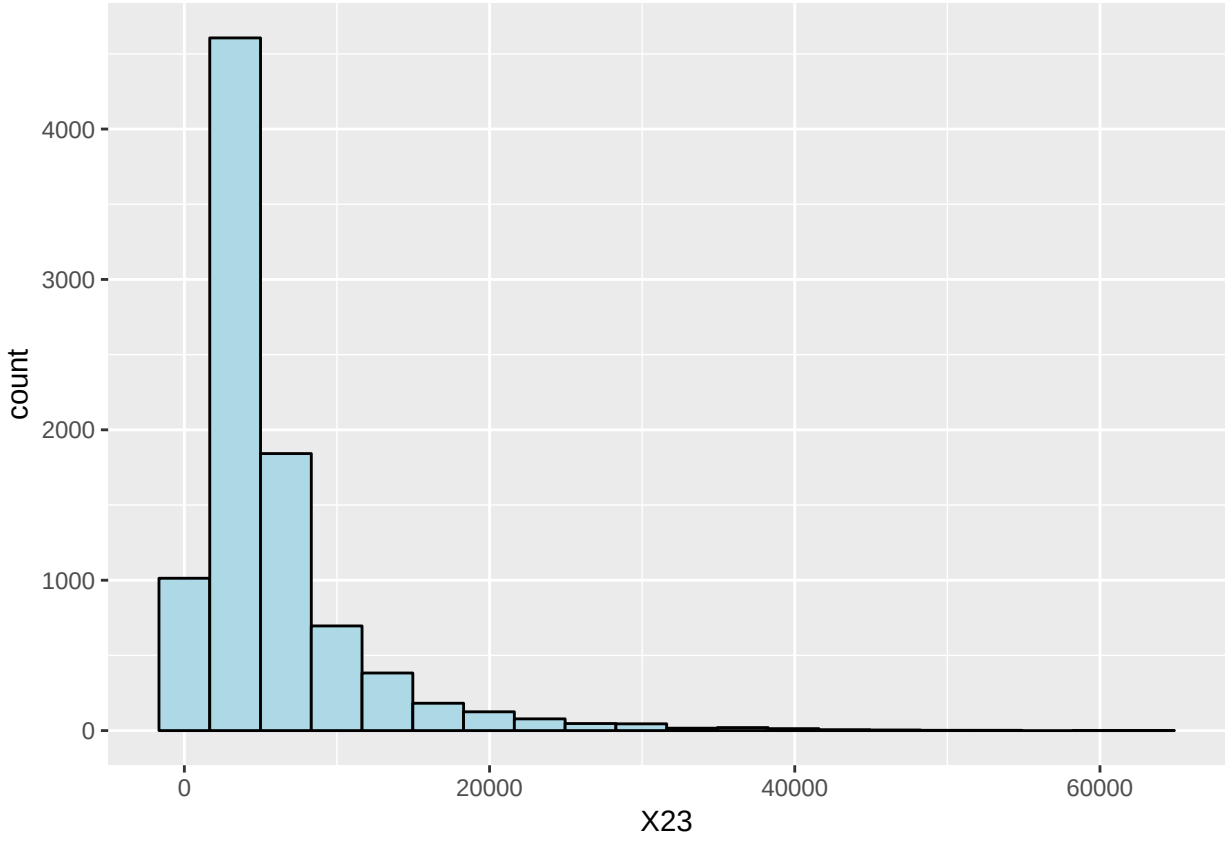

```
##
## [[22]]
```

```
## Warning: Removed 27 rows containing non-finite values (stat_bin).
```



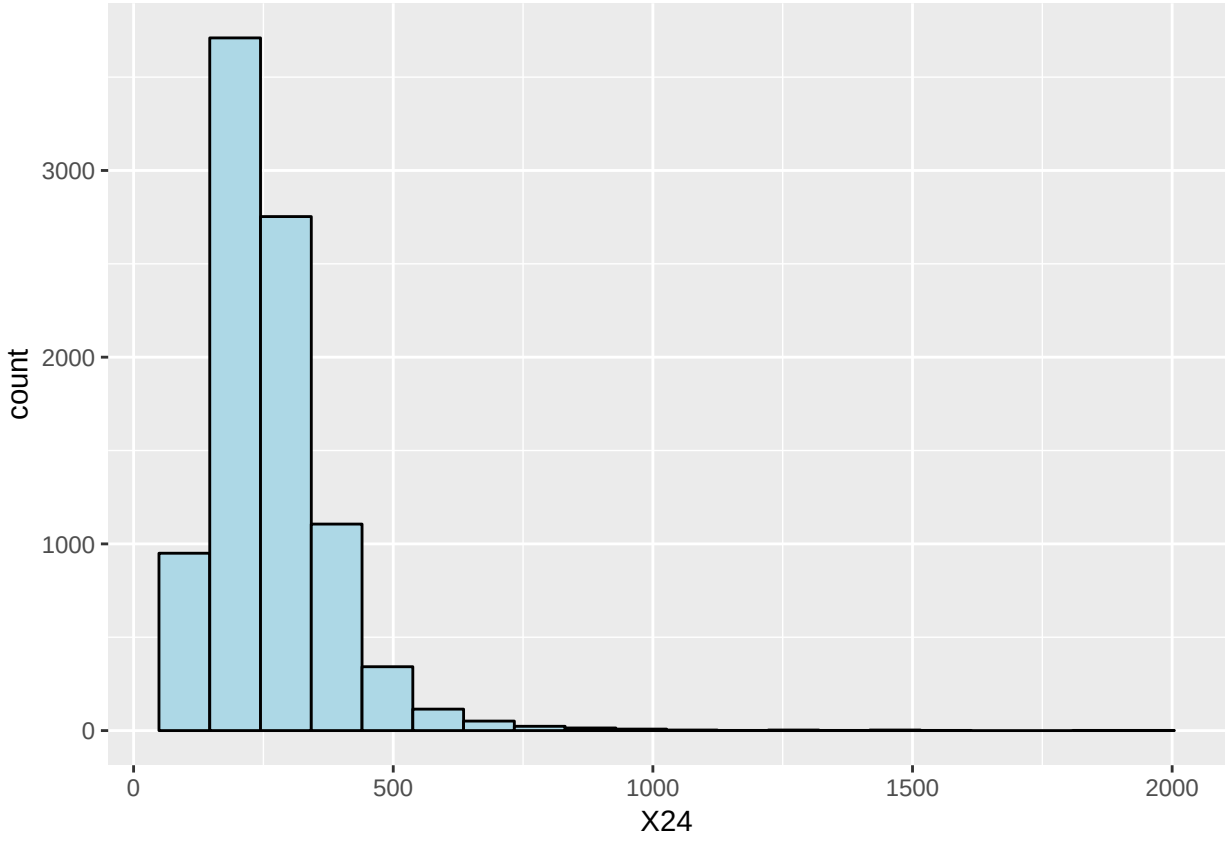

```
##
## [[23]]
```

```
## Warning: Removed 31 rows containing non-finite values (stat_bin).
```



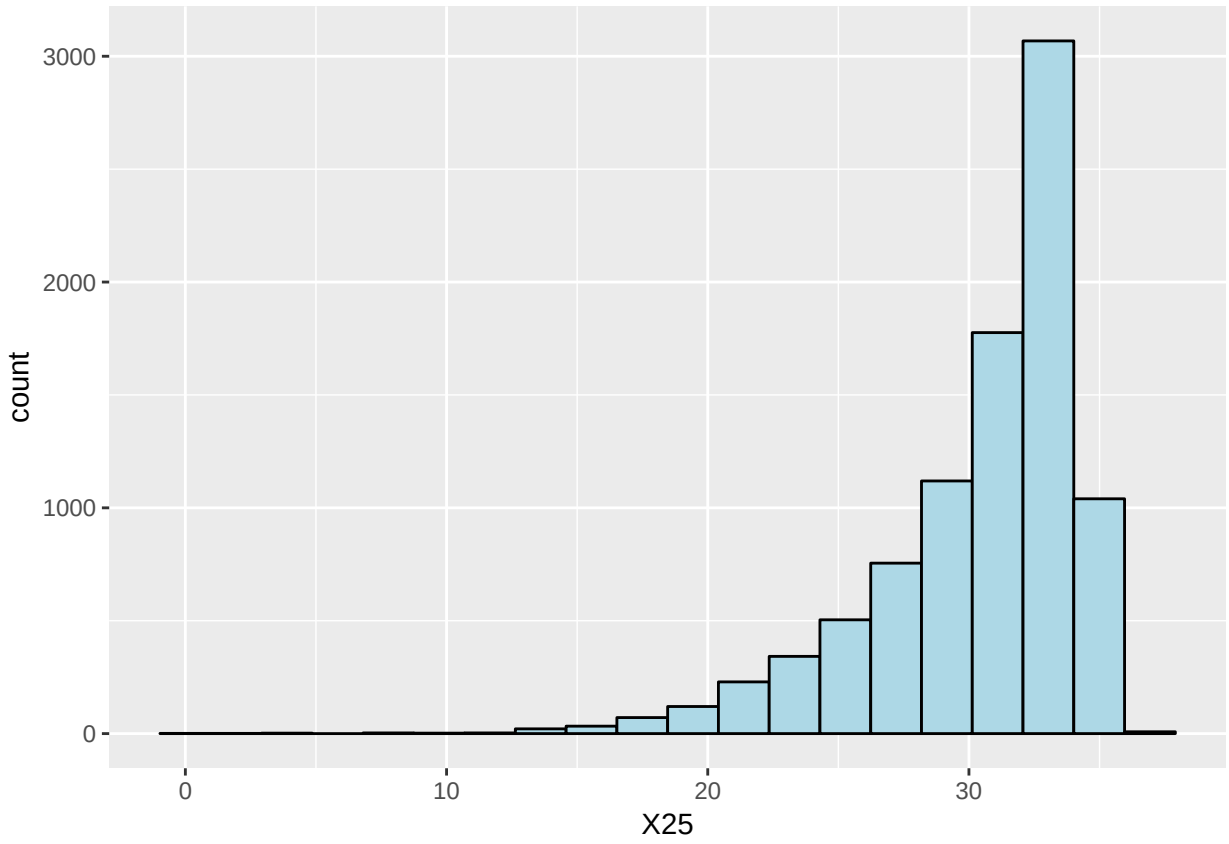

```
##
## [[24]]
```

```
## Warning: Removed 27 rows containing non-finite values (stat_bin).
```



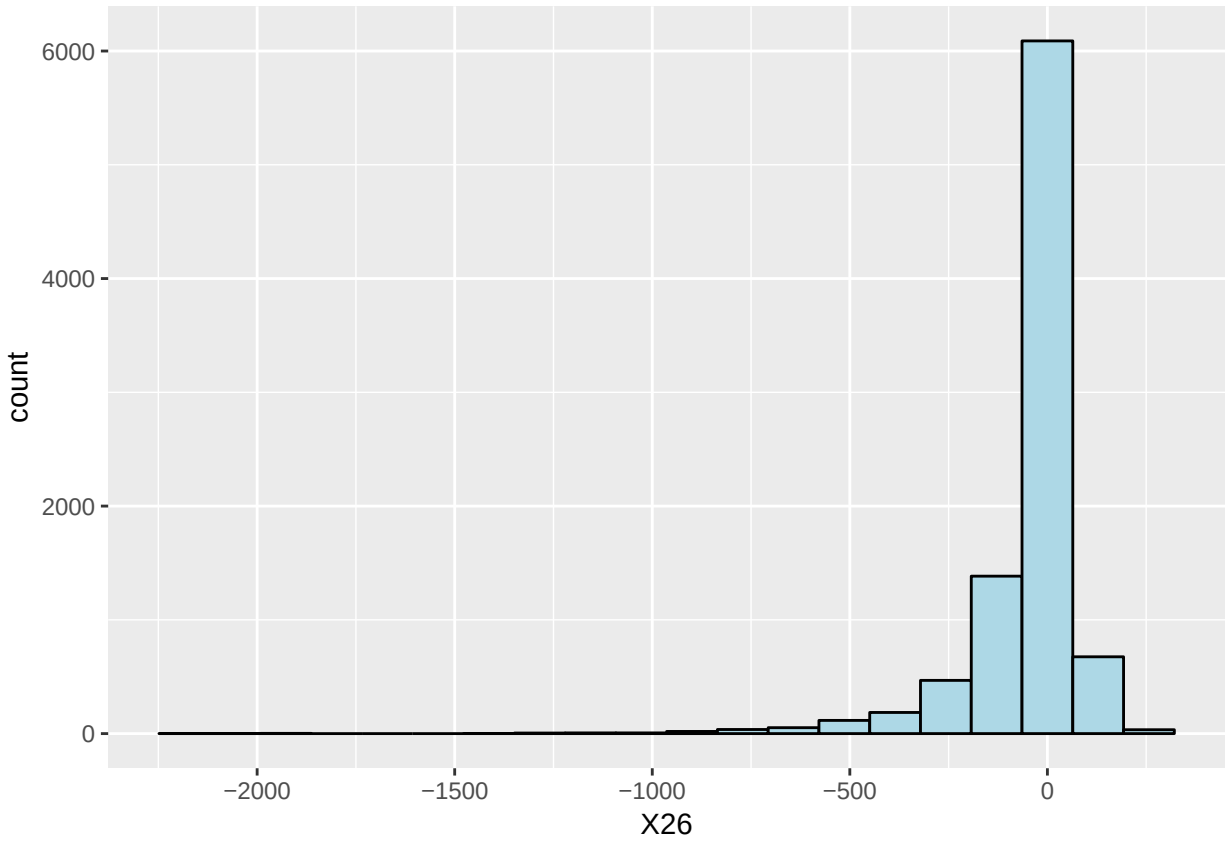

```
##
## [[25]]
```

```
## Warning: Removed 15 rows containing non-finite values (stat_bin).
```



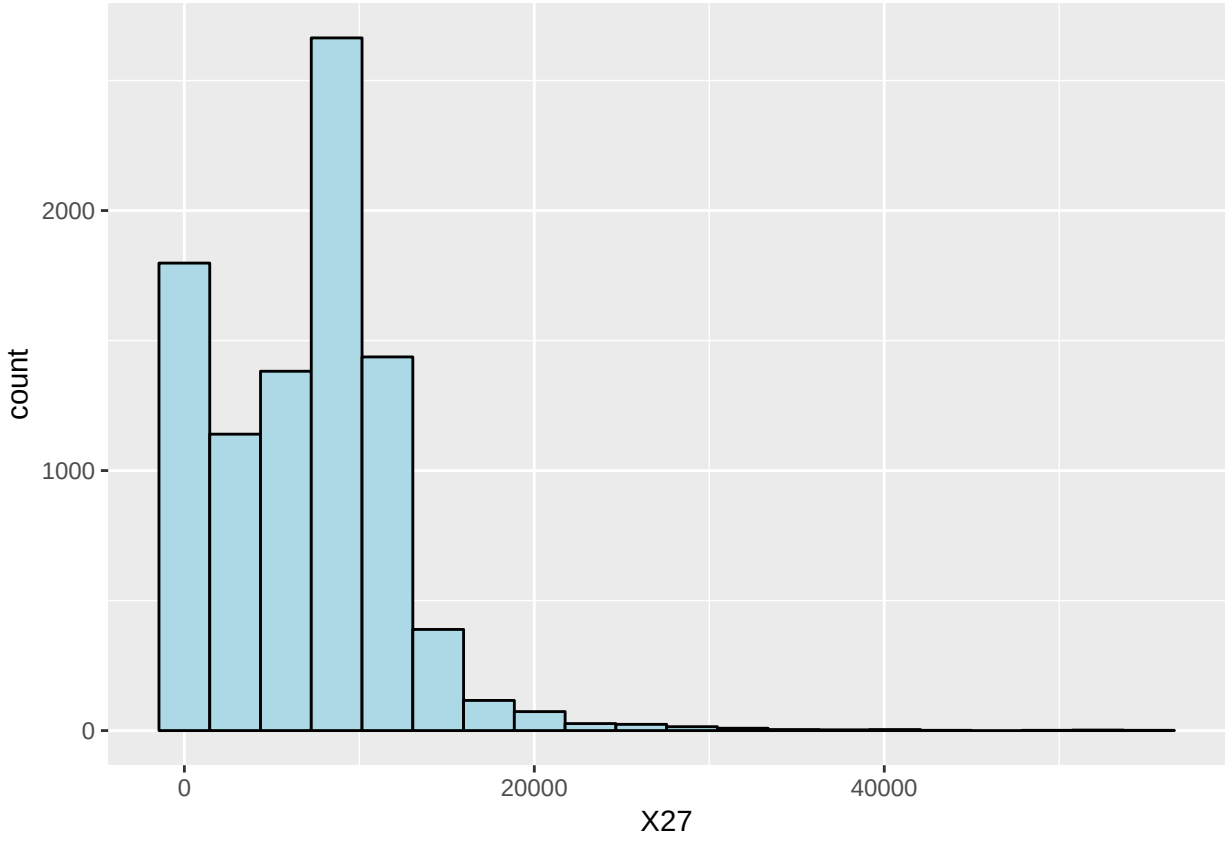

```
##
## [[26]]
```

```
## Warning: Removed 32 rows containing non-finite values (stat_bin).
```



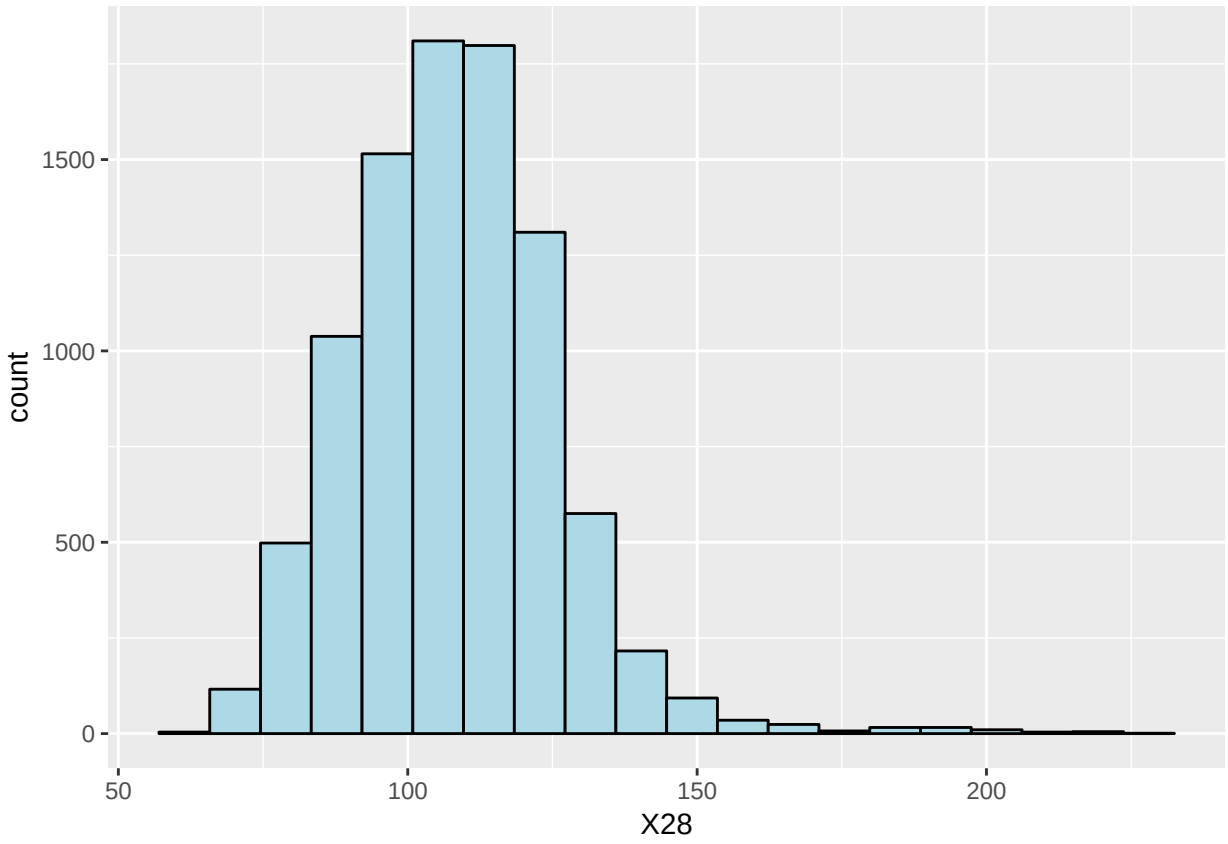

```
##
## [[27]]
```

```
## Warning: Removed 23 rows containing non-finite values (stat_bin).
```



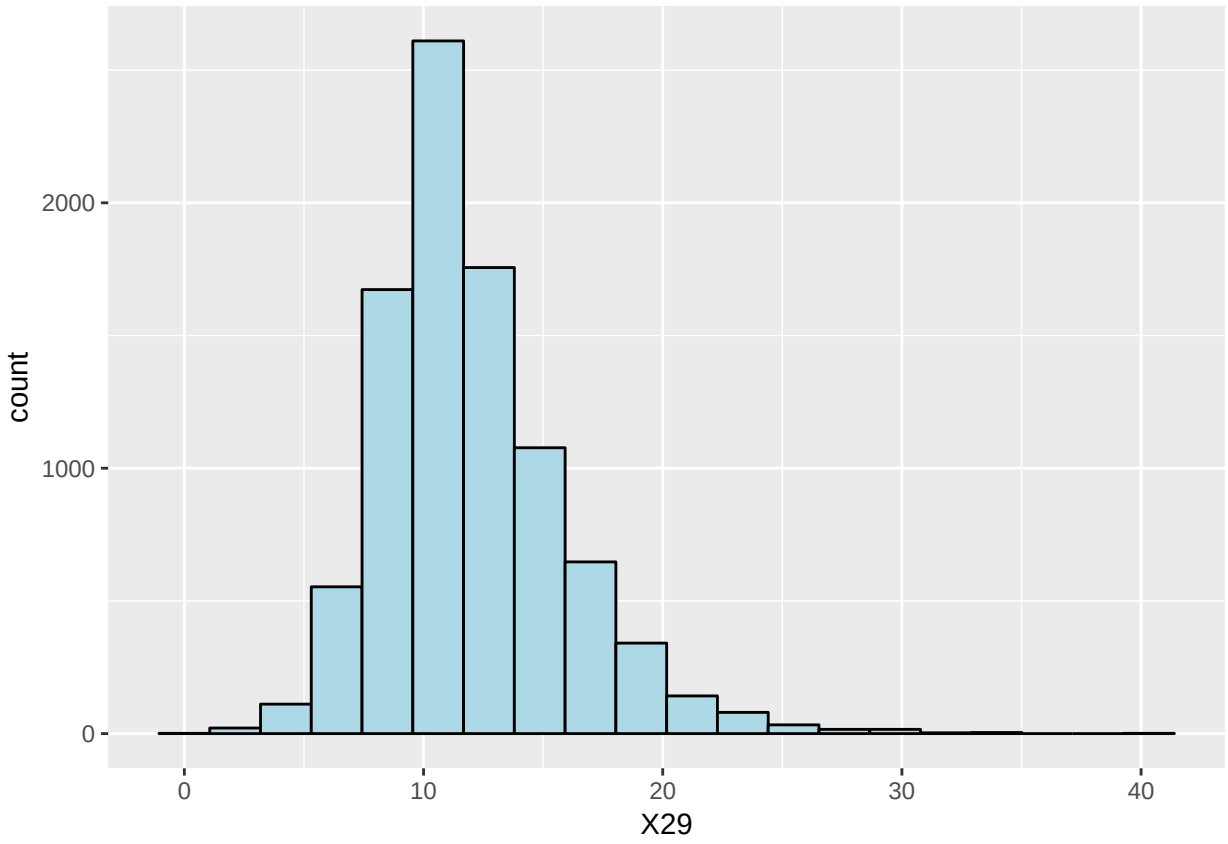

```
##
## [[28]]
```

```
## Warning: Removed 22 rows containing non-finite values (stat_bin).
```



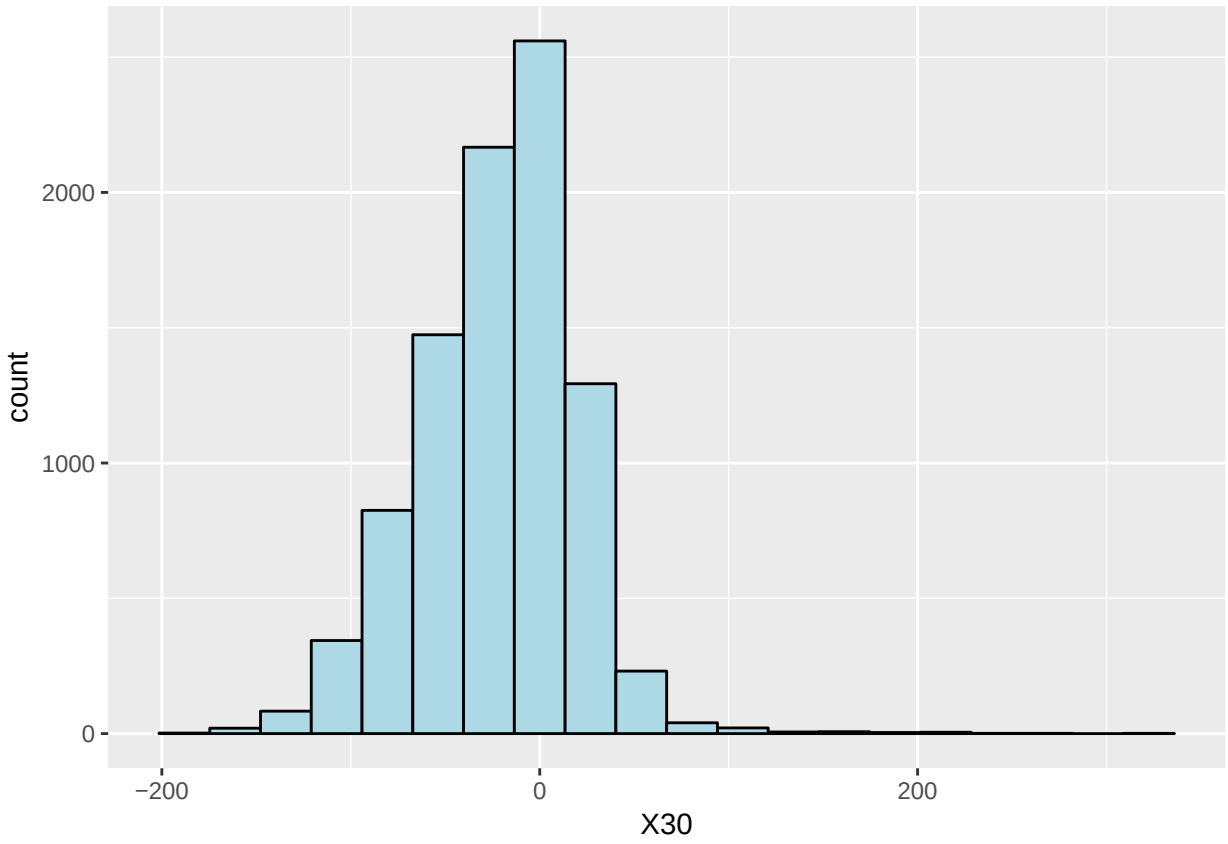

```
##
## [[29]]
```

```
## Warning: Removed 28 rows containing non-finite values (stat_bin).
```



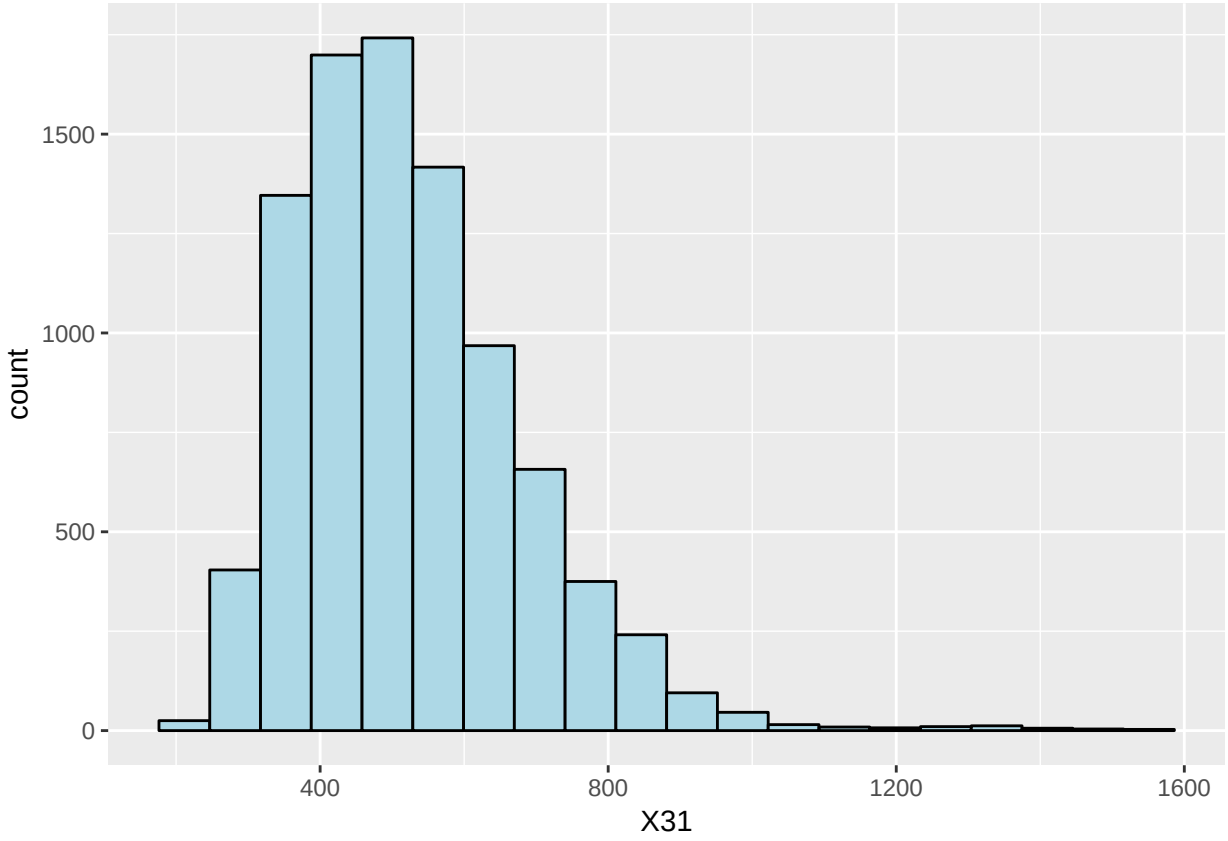

```
##
## [[30]]
```

```
## Warning: Removed 28 rows containing non-finite values (stat_bin).
```



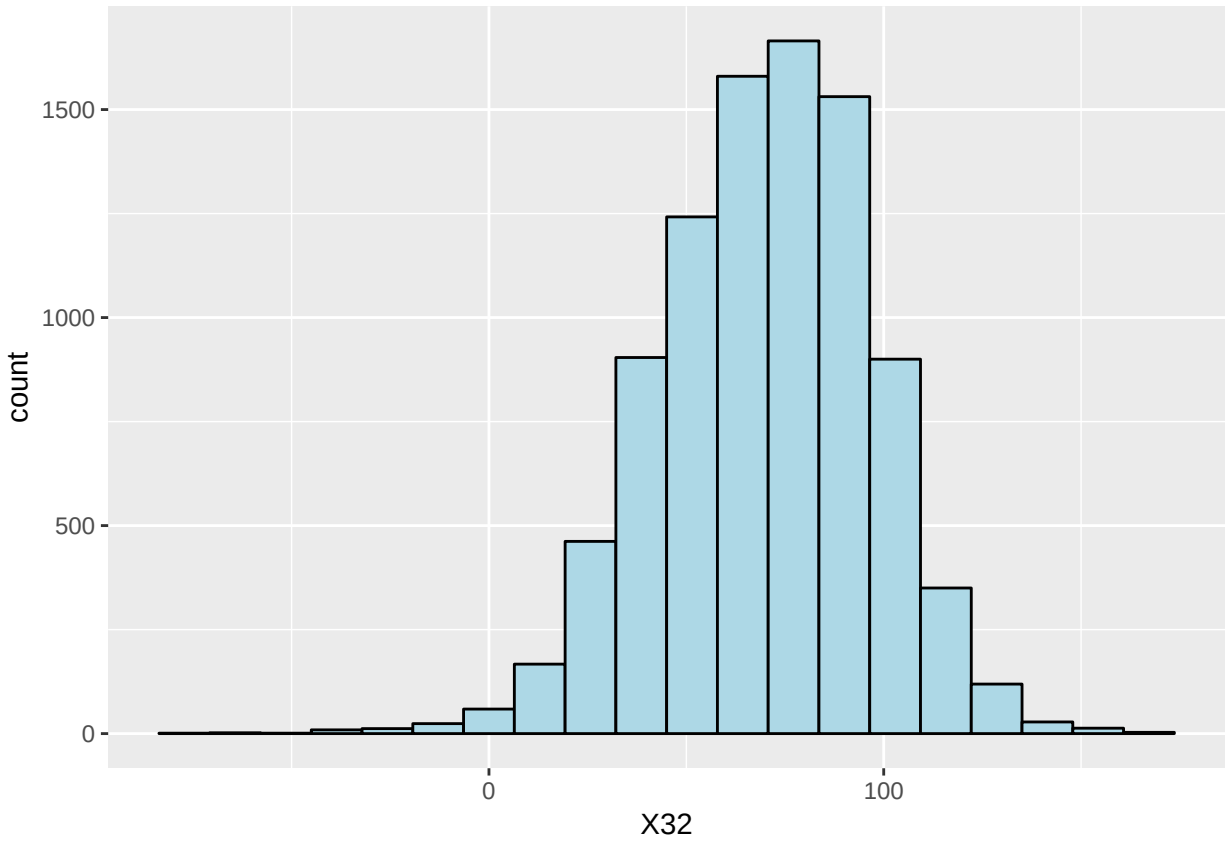

```
##
## [[31]]
```

```
## Warning: Removed 32 rows containing non-finite values (stat_bin).
```



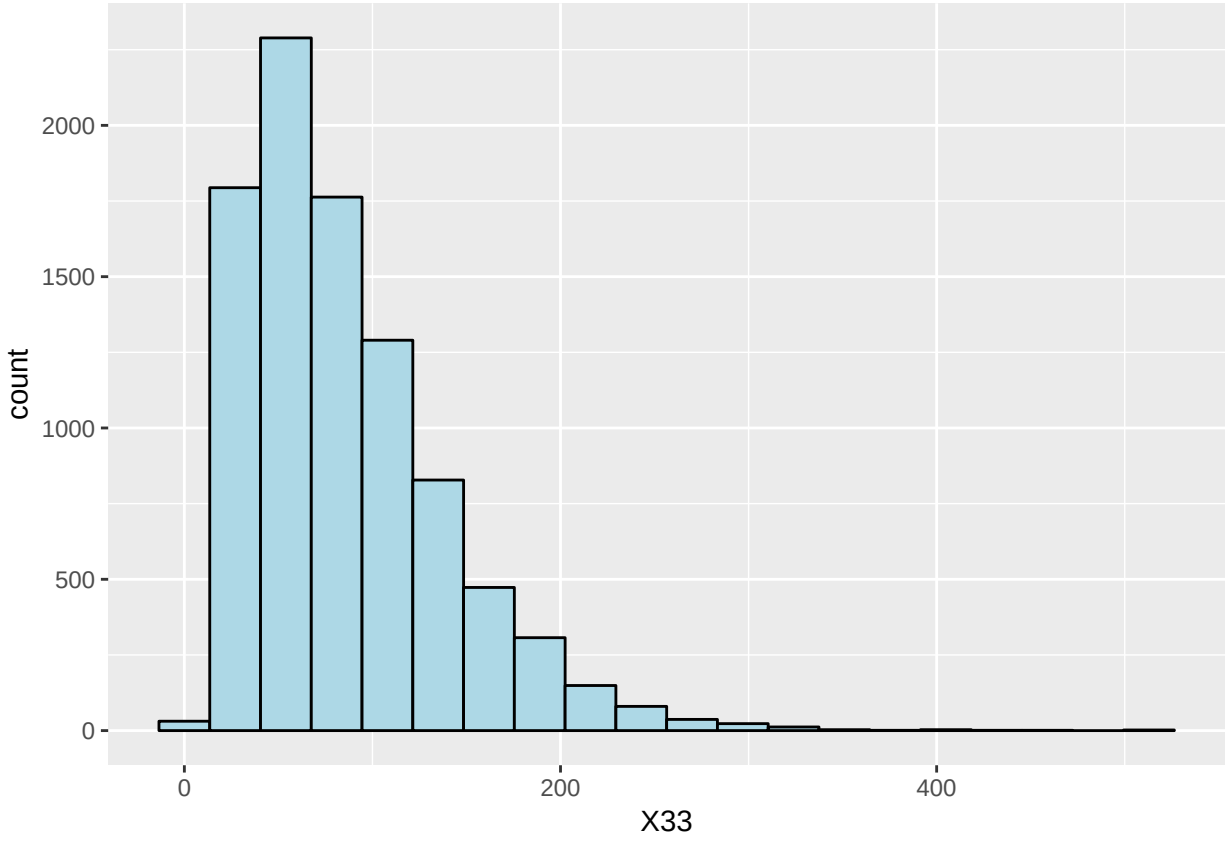

```
##
## [[32]]
```

```
## Warning: Removed 41 rows containing non-finite values (stat_bin).
```



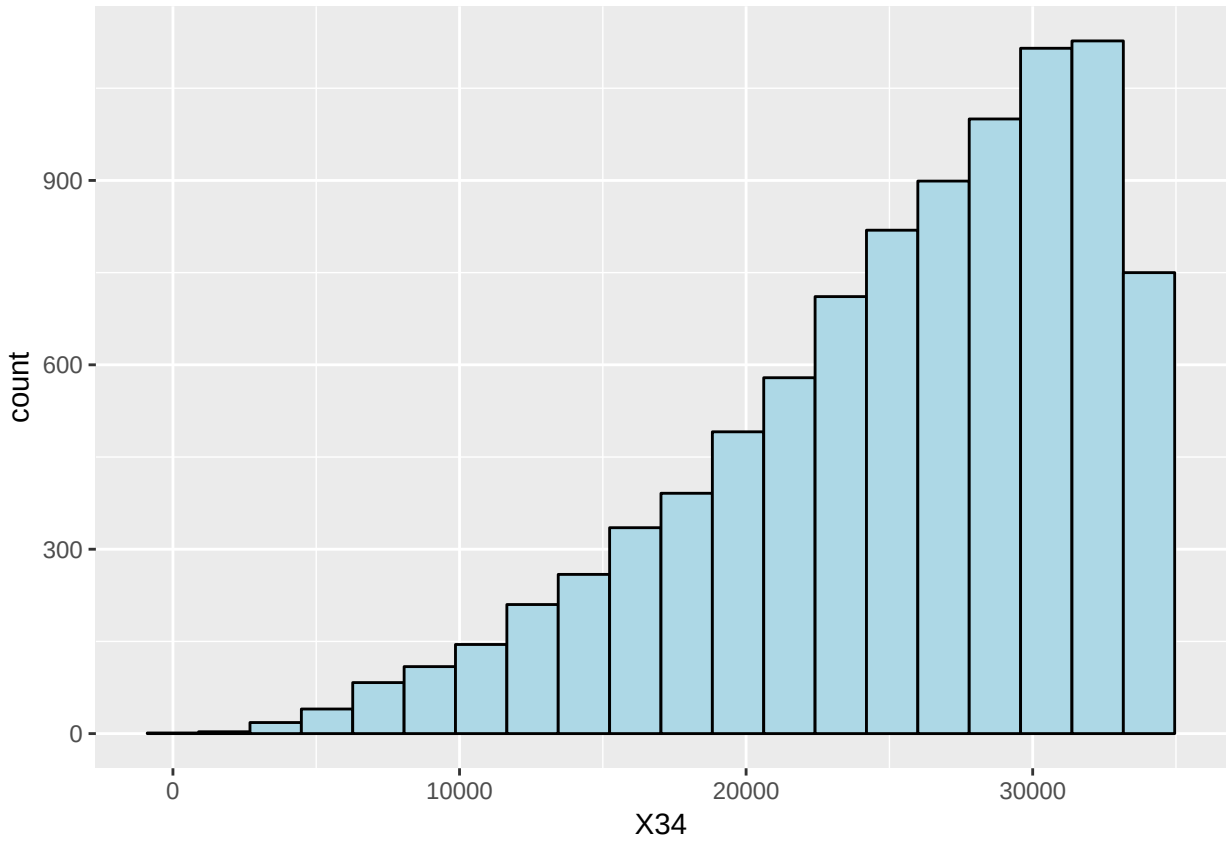

```
##
## [[33]]
```

```
## Warning: Removed 26 rows containing non-finite values (stat_bin).
```



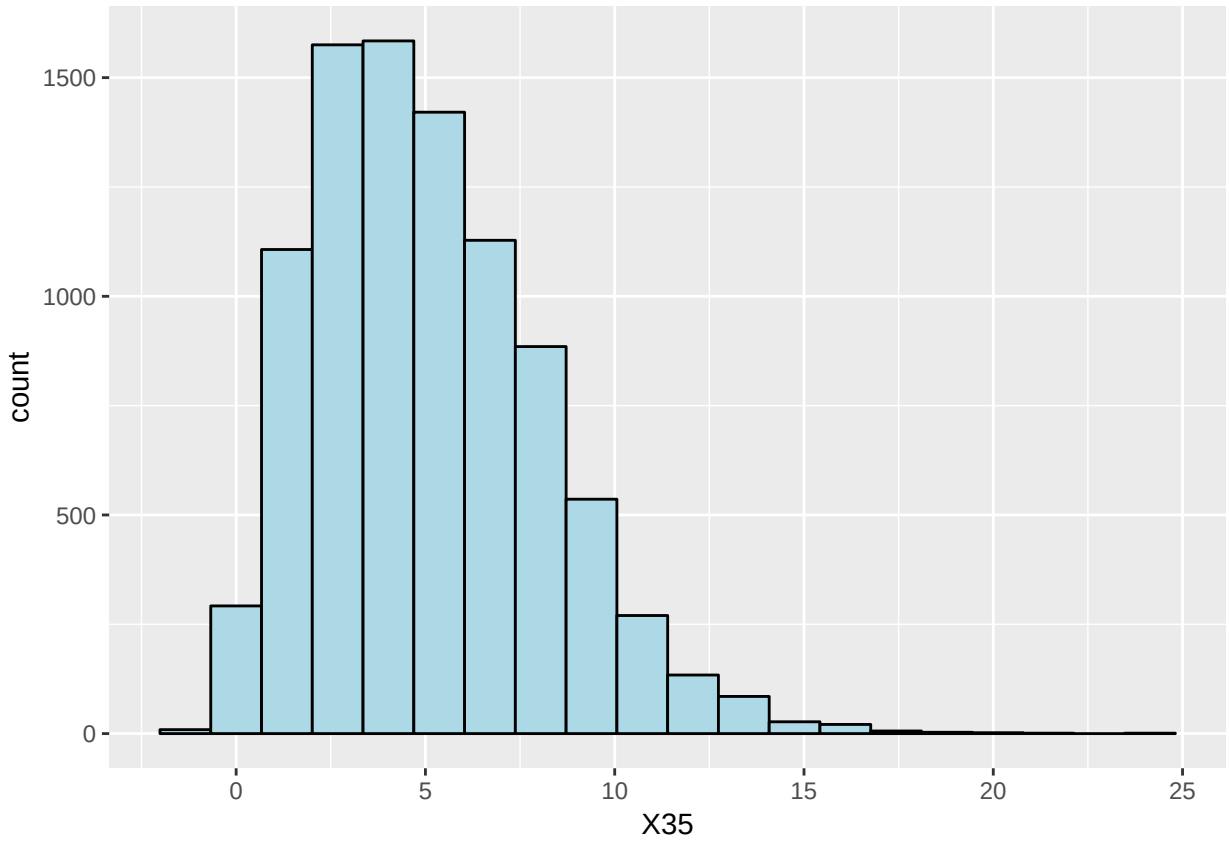

```
##
## [[34]]
```

```
## Warning: Removed 28 rows containing non-finite values (stat_bin).
```



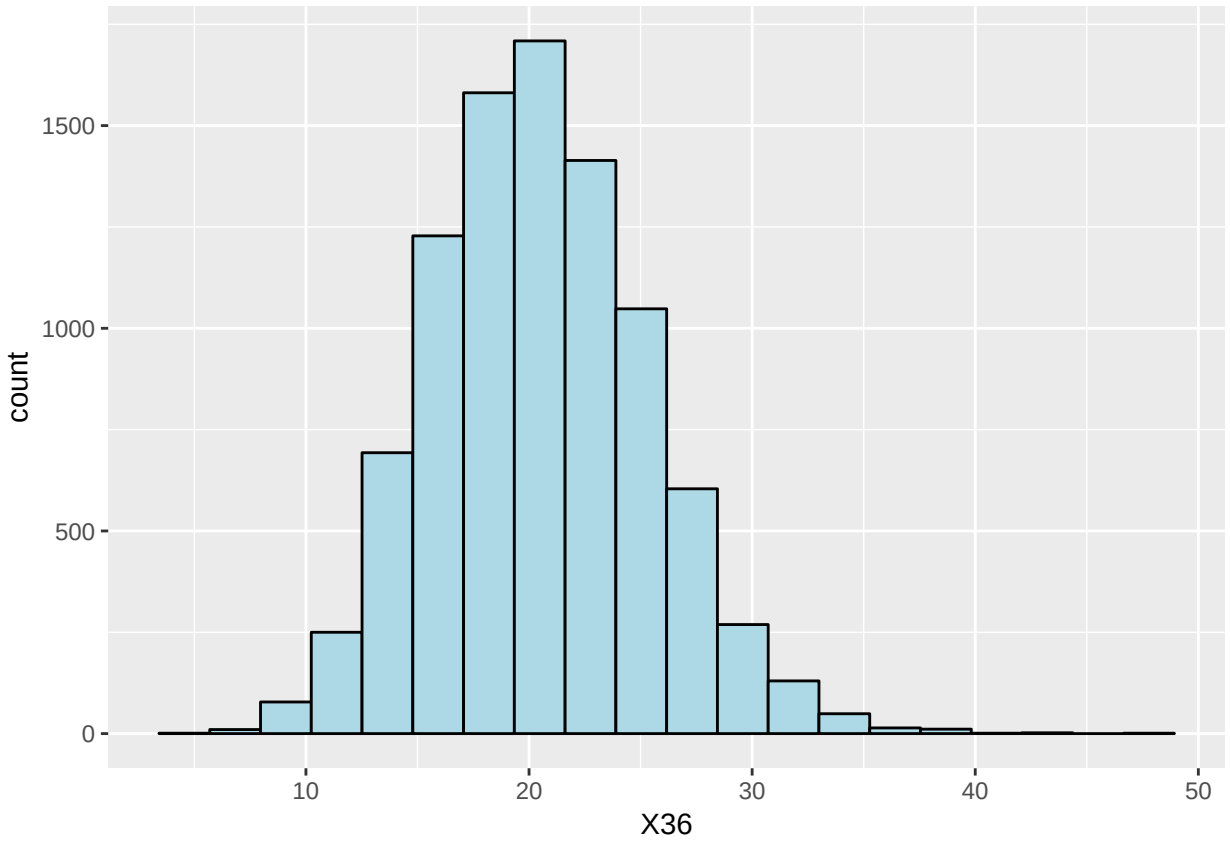

```
##
## [[35]]
```

```
## Warning: Removed 26 rows containing non-finite values (stat_bin).
```



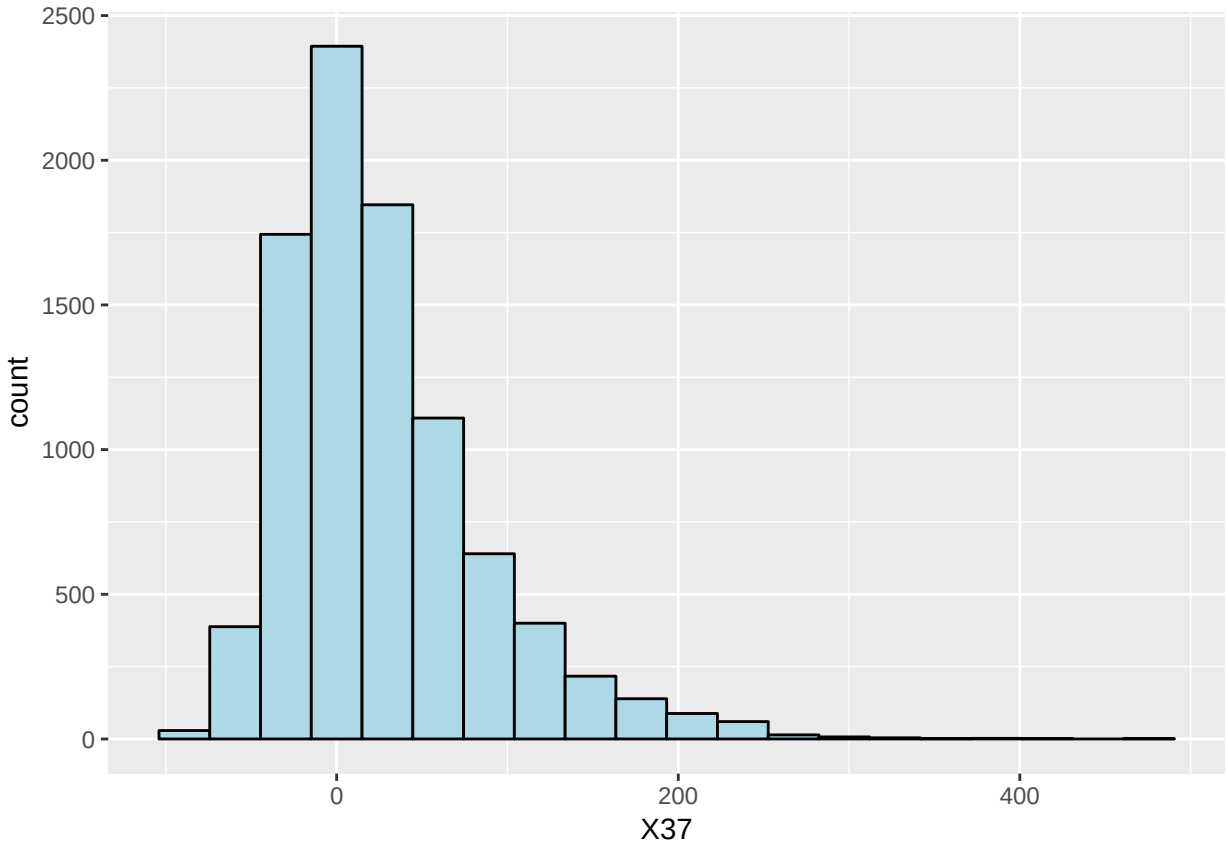

```
##
## [[36]]
```

```
## Warning: Removed 20 rows containing non-finite values (stat_bin).
```



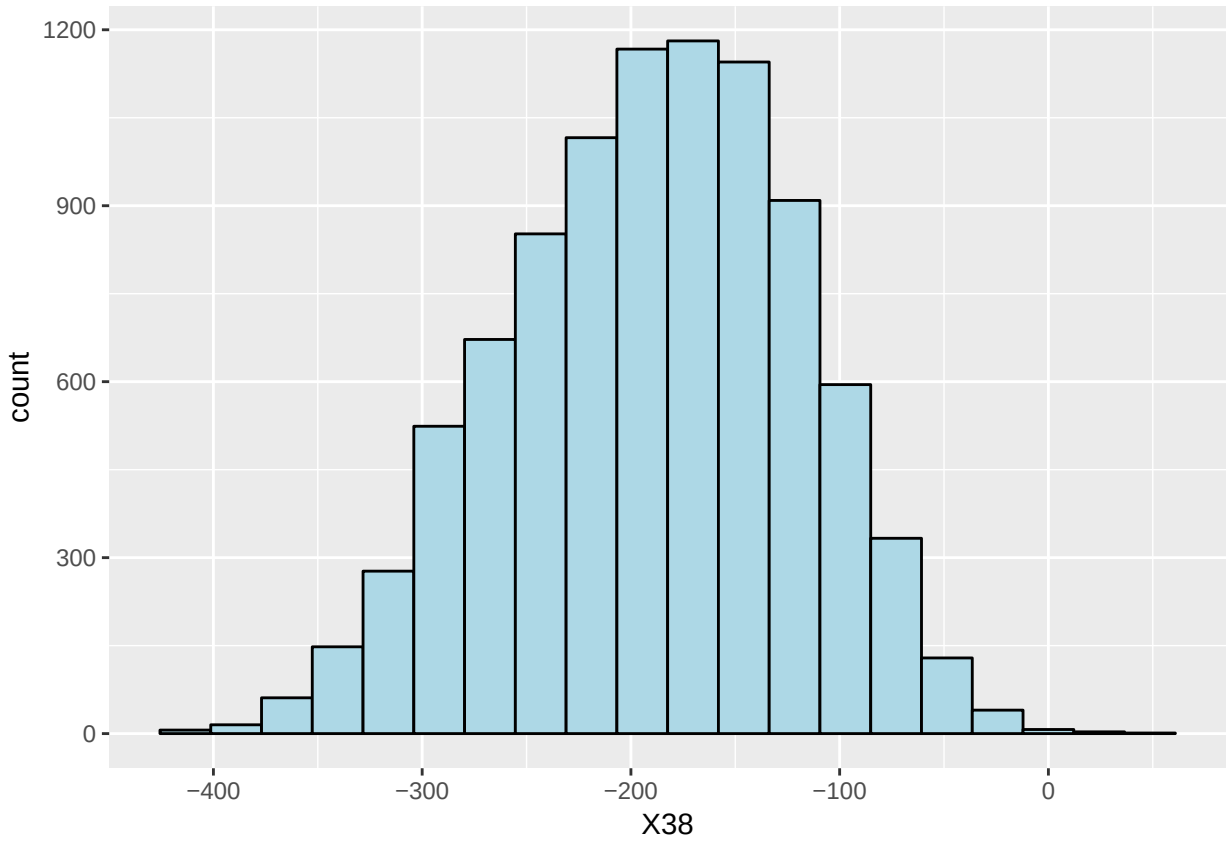

```
##
## [[37]]
```

```
## Warning: Removed 29 rows containing non-finite values (stat_bin).
```



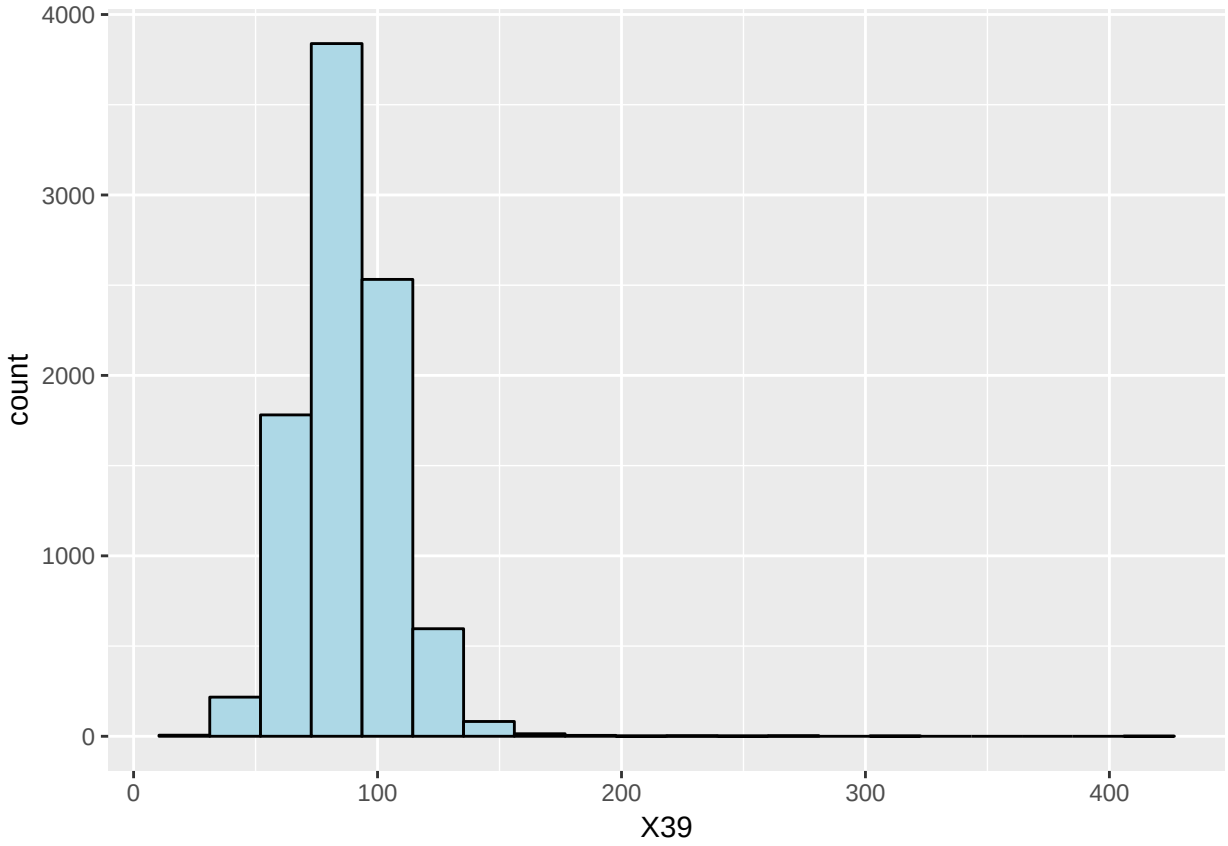

```
##
## [[38]]
```

```
## Warning: Removed 32 rows containing non-finite values (stat_bin).
```



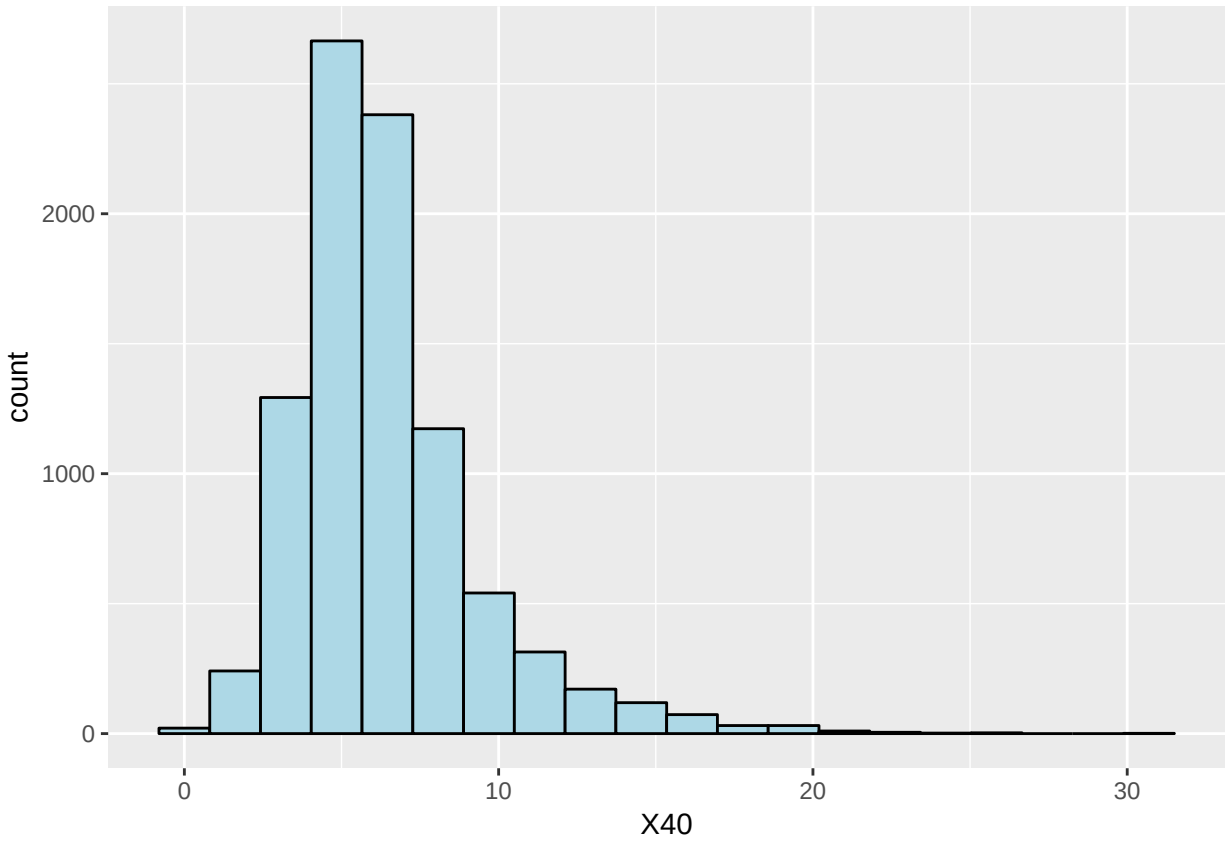

```
##
## [[39]]
```

```
## Warning: Removed 28 rows containing non-finite values (stat_bin).
```



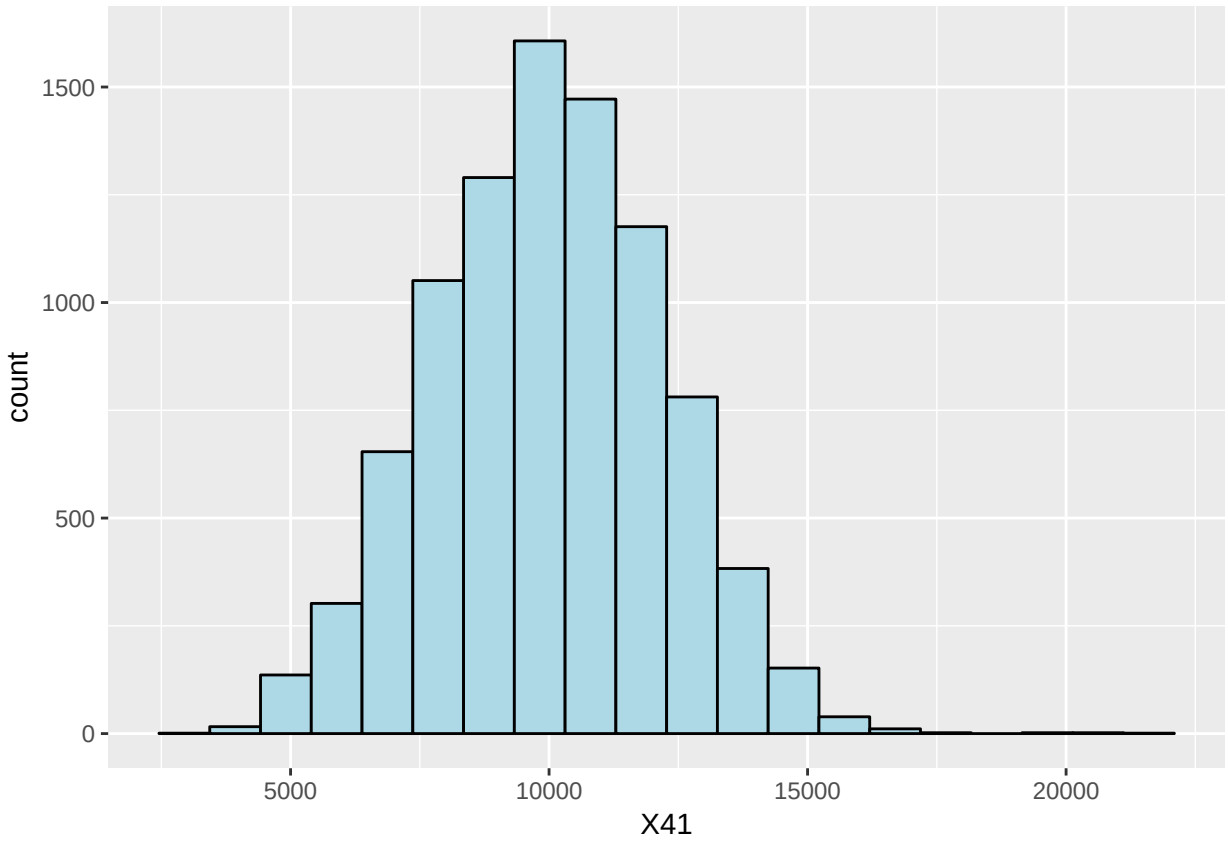

```
##
## [[40]]
```

```
## Warning: Removed 38 rows containing non-finite values (stat_bin).
```



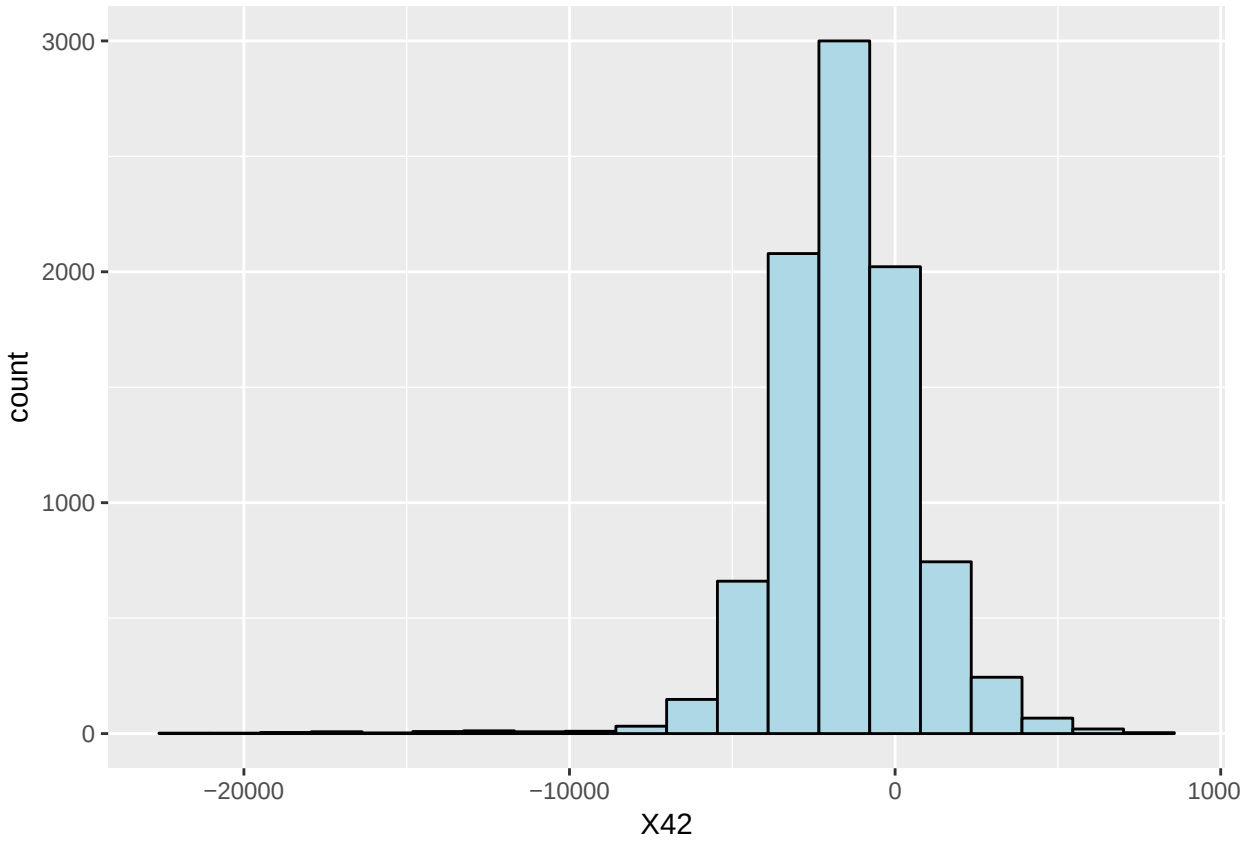

```
##
## [[41]]
```

```
## Warning: Removed 35 rows containing non-finite values (stat_bin).
```



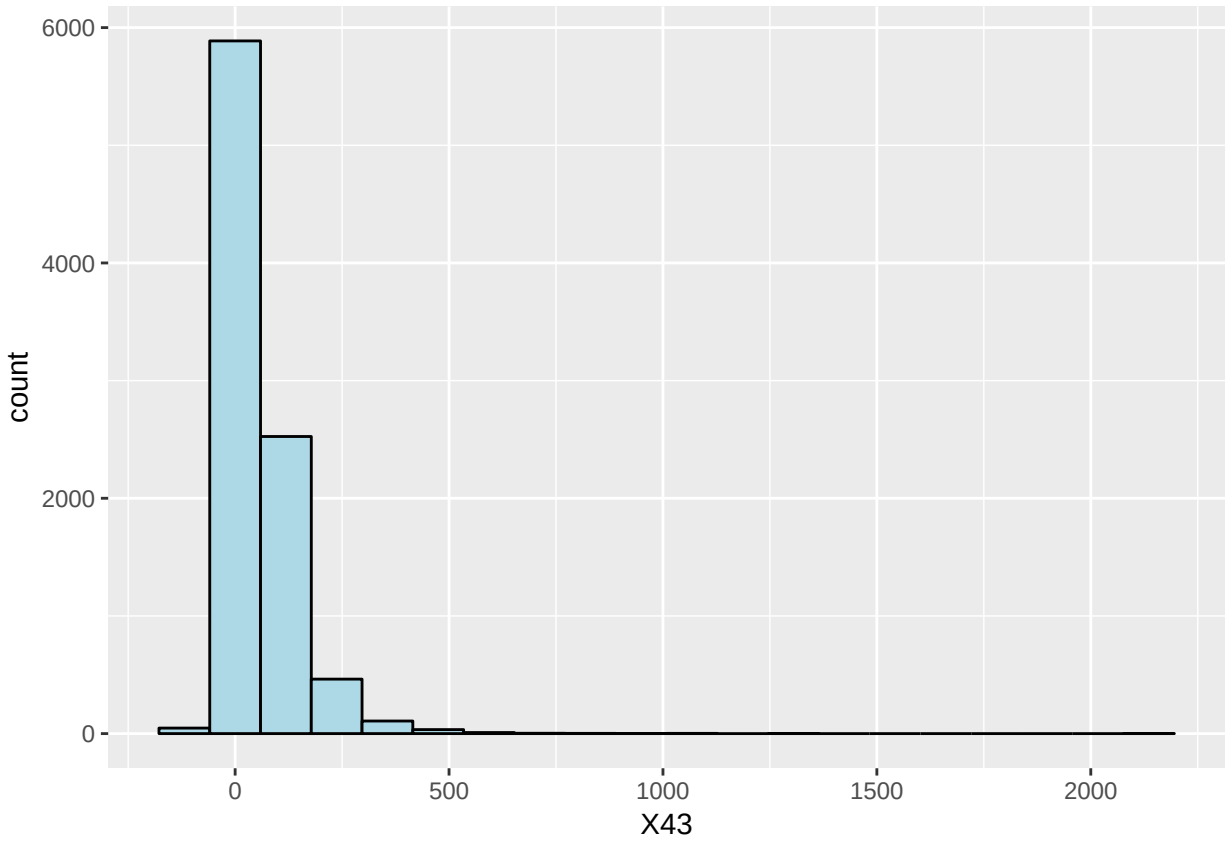

```
##
## [[42]]
```

```
## Warning: Removed 34 rows containing non-finite values (stat_bin).
```



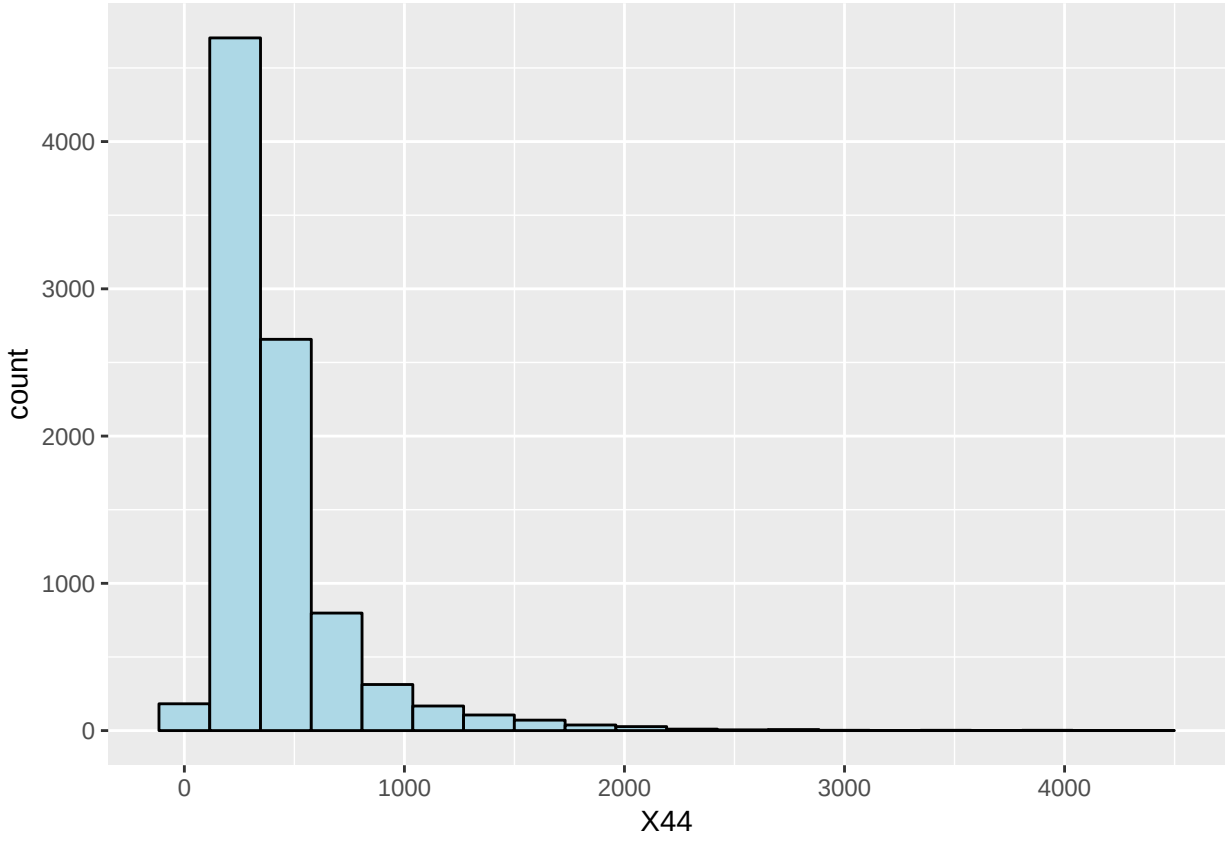

```
##
## [[43]]
```

```
## Warning: Removed 31 rows containing non-finite values (stat_bin).
```



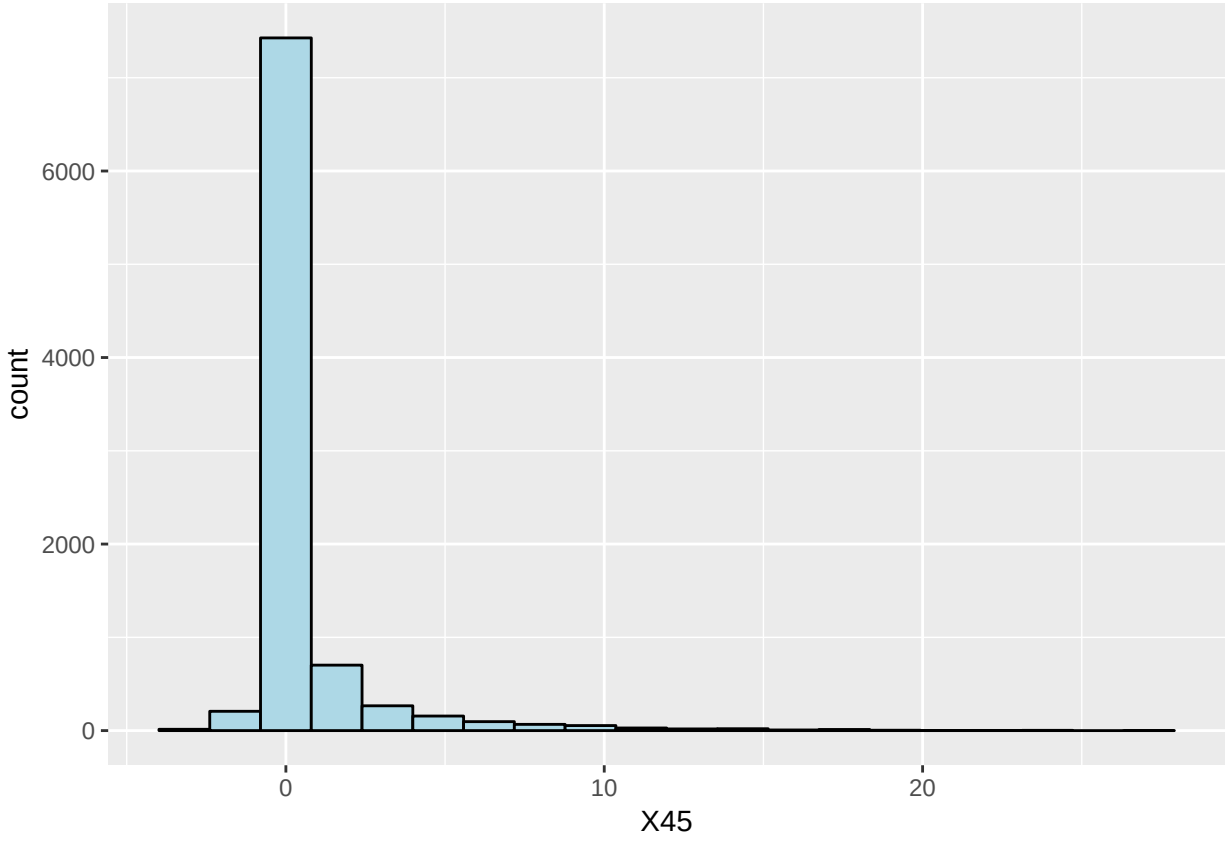

```
##
## [[44]]
```

```
## Warning: Removed 18 rows containing non-finite values (stat_bin).
```



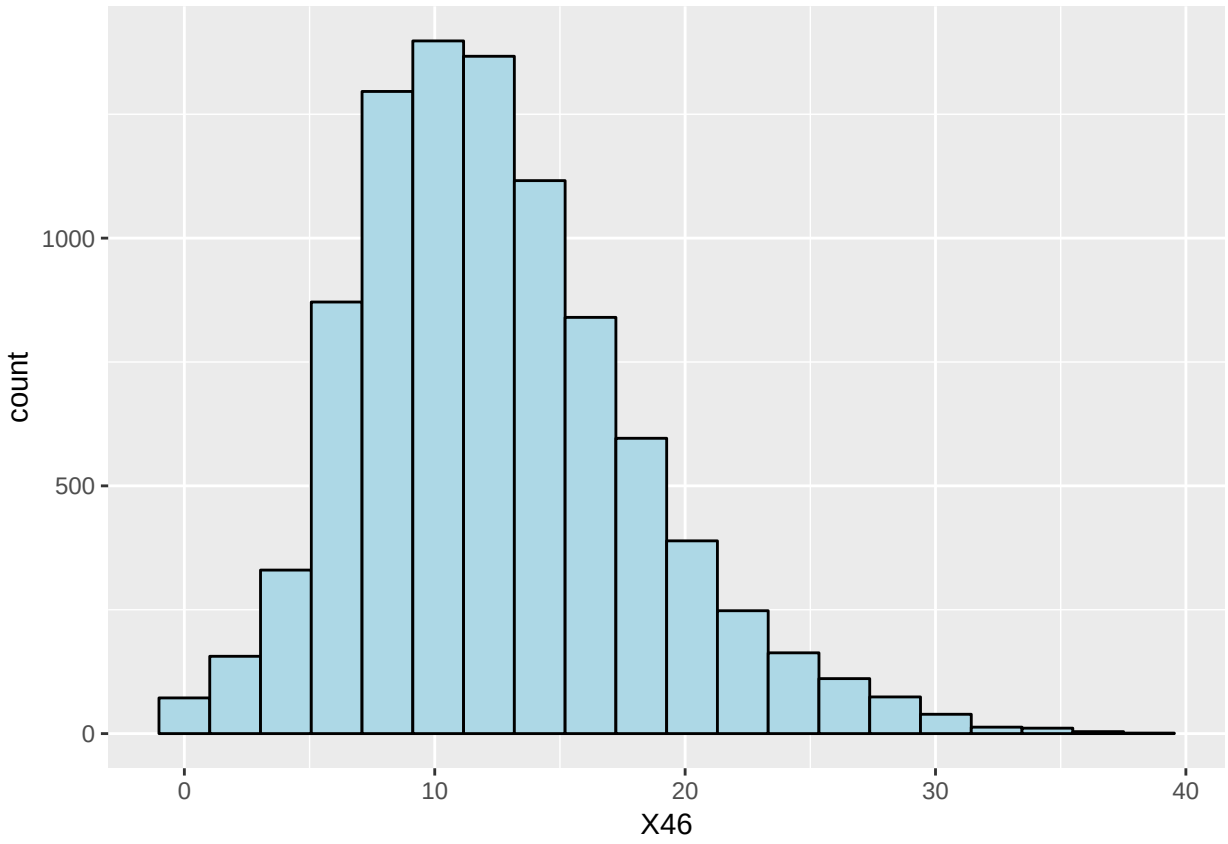

```
##
## [[45]]
```

```
## Warning: Removed 28 rows containing non-finite values (stat_bin).
```



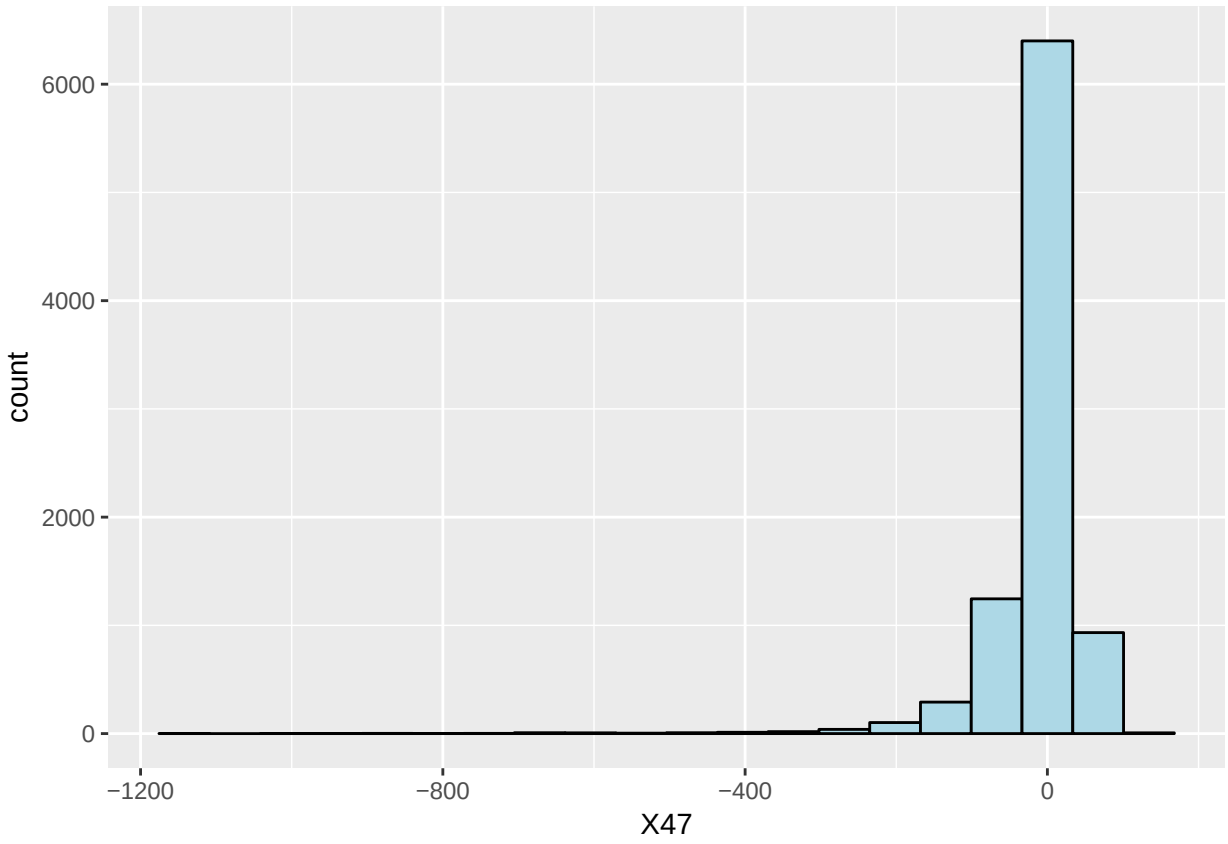

```
##
## [[46]]
```

```
## Warning: Removed 18 rows containing non-finite values (stat_bin).
```



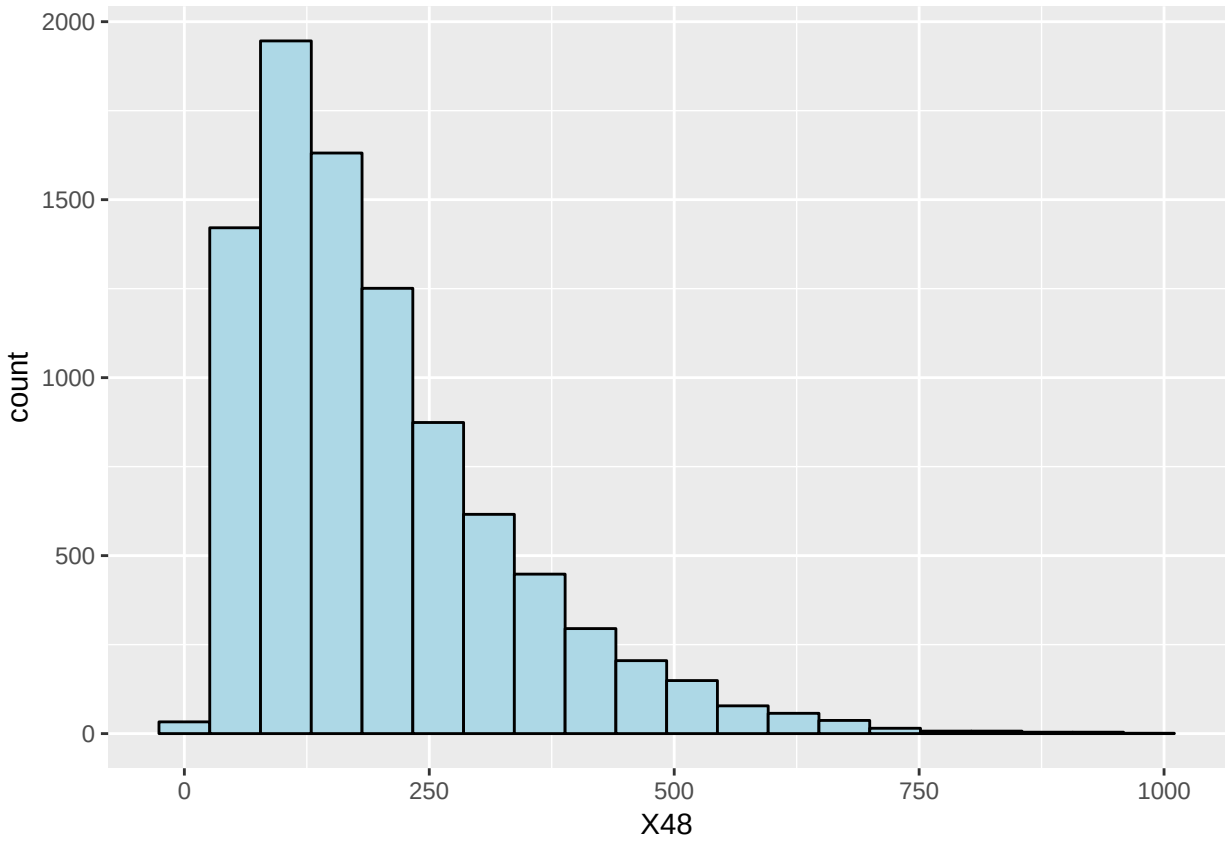

```
##
## [[47]]
```

```
## Warning: Removed 31 rows containing non-finite values (stat_bin).
```



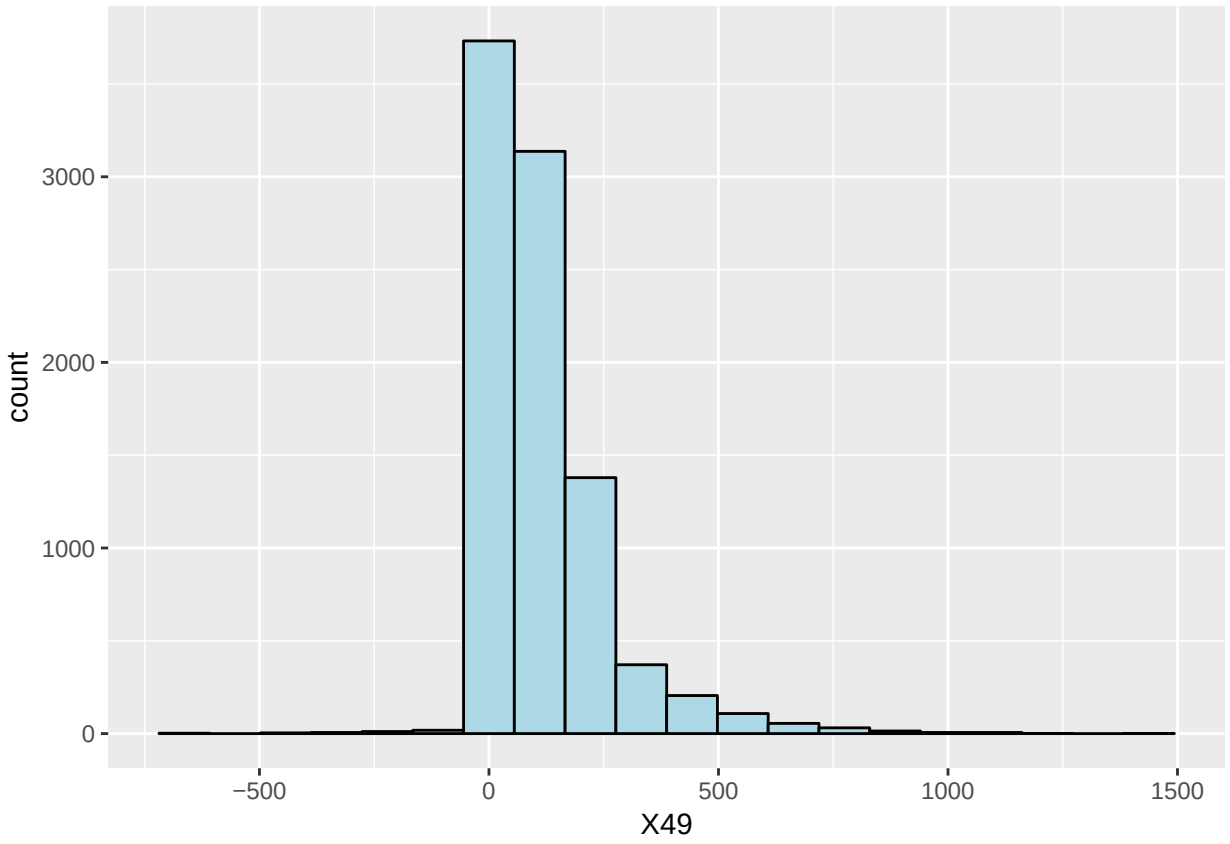

```
##
## [[48]]
```

```
## Warning: Removed 34 rows containing non-finite values (stat_bin).
```



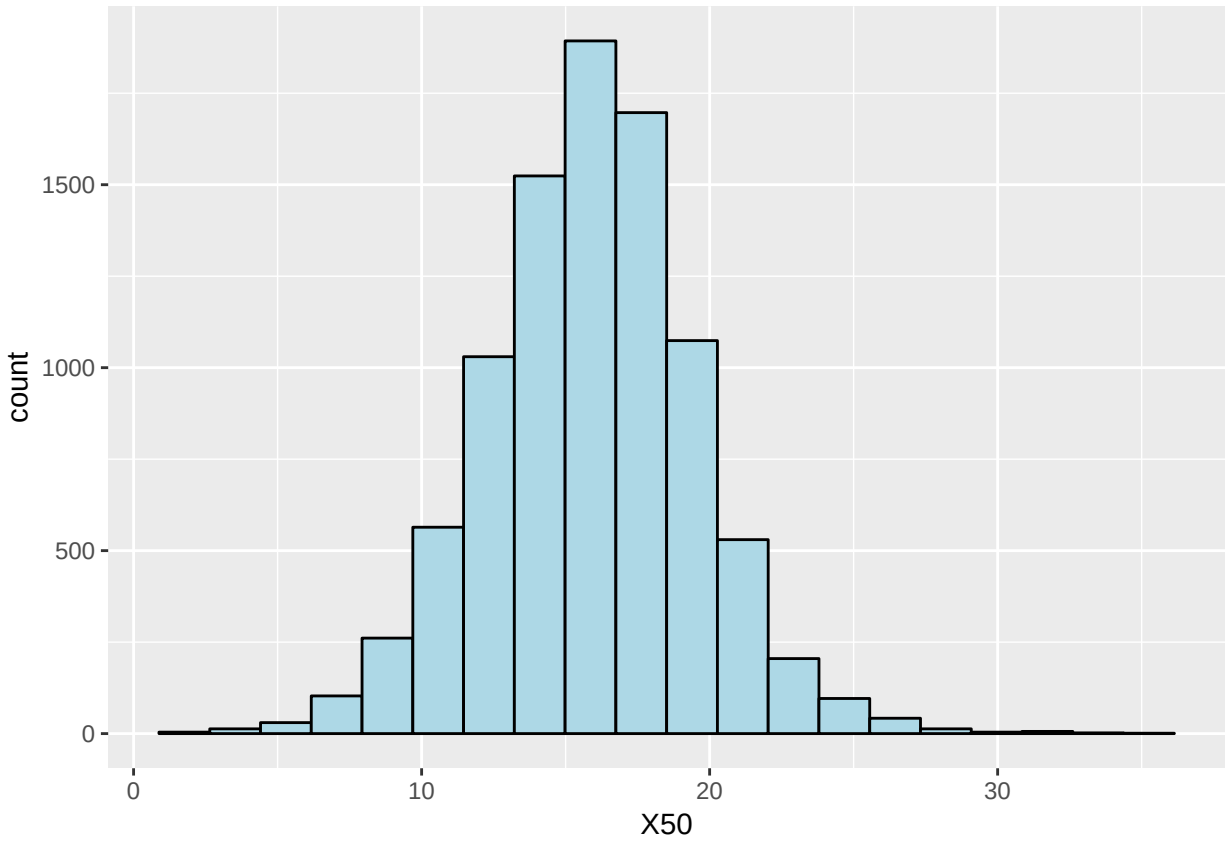

```
##
## [[49]]
```

```
## Warning: Removed 26 rows containing non-finite values (stat_bin).
```




```
##
## [[50]]
```

```
## Warning: Removed 21 rows containing non-finite values (stat_bin).
```


count
1500
1000
500
0
0
10
20
30
X50