HW01

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##

```
url <- "http://people.math.umass.edu/~anna/Stat597AFall2016/rnf6080.dat"
data.df <- read.table(url, header = FALSE)
```

##

```
dim(data.df)
```

```
## [1] 5070   27
```

##

```
colnames(data.df)
```

```
##  [1] "V1"  "V2"  "V3"  "V4"  "V5"  "V6"  "V7"  "V8"  "V9"  "V10" "V11" "V12"
## [13] "V13" "V14" "V15" "V16" "V17" "V18" "V19" "V20" "V21" "V22" "V23" "V24"
## [25] "V25" "V26" "V27"
```

##

```
data.df[5, 7]
```

```
## [1] 0
```

2

```
data.df[2, ]
```

```
##   V1 V2 V3 V4 V5 V6 V7 V8 V9 V10 V11 V12 V13 V14 V15 V16 V17 V18 V19 V20 V21
## 2 60  4  2  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
##   V22 V23 V24 V25 V26 V27
## 2   0   0   0   0   0   0
```

6

```
head(data.df)
```

```
##   V1 V2 V3 V4 V5 V6 V7 V8 V9 V10 V11 V12 V13 V14 V15 V16 V17 V18 V19 V20 V21
## 1 60  4  1  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 2 60  4  2  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 3 60  4  3  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 4 60  4  4  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 5 60  4  5  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 6 60  4  6  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
##   V22 V23 V24 V25 V26 V27
## 1   0   0   0   0   0   0
## 2   0   0   0   0   0   0
## 3   0   0   0   0   0   0
## 4   0   0   0   0   0   0
## 5   0   0   0   0   0   0
## 6   0   0   0   0   0   0
```

6

```
tail(data.df)
```

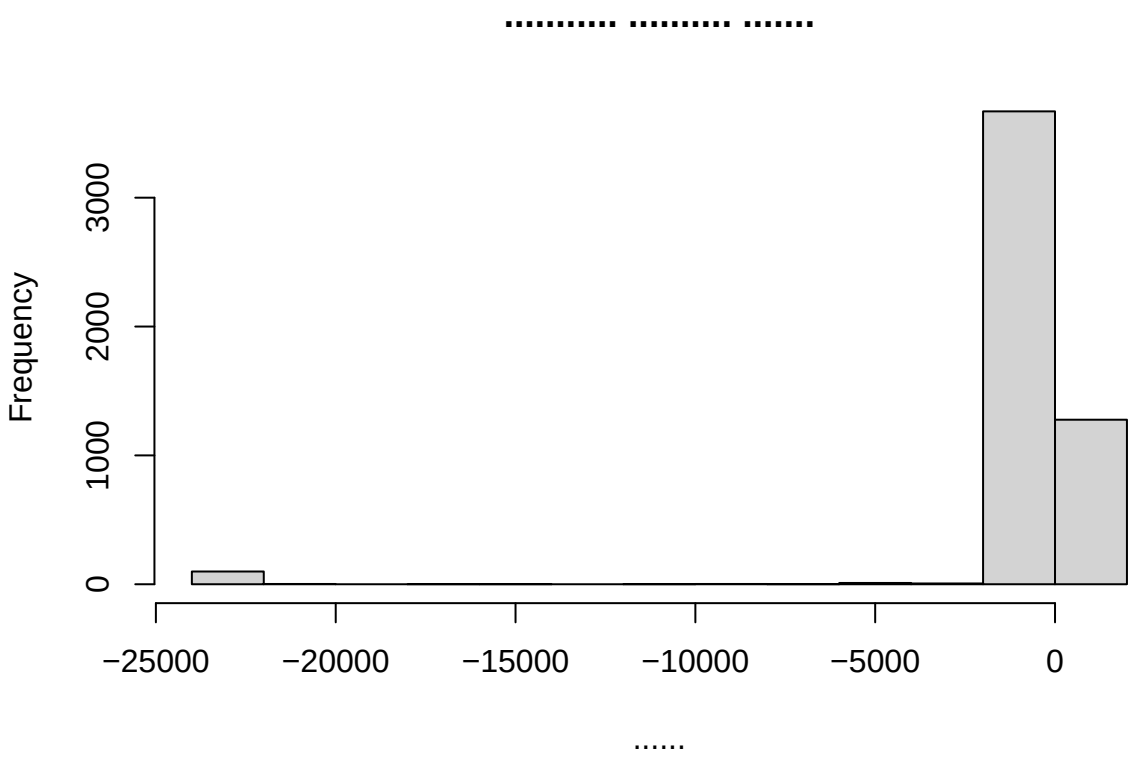
```
##      V1 V2 V3 V4 V5 V6 V7 V8 V9 V10 V11 V12 V13 V14 V15 V16 V17 V18 V19 V20 V21
## 5065 80 11 25  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 5066 80 11 26  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 5067 80 11 27  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 5068 80 11 28  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 5069 80 11 29  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
## 5070 80 11 30  0  0  0  0  0  0   0   0   0   0   0   0   0   0   0   0   0   0
##      V22 V23 V24 V25 V26 V27
## 5065   0   0   0   0   0   0
## 5066   0   0   0   0   0   0
## 5067   0   0   0   0   0   0
## 5068   0   0   0   0   0   0
## 5069   0   0   0   0   0   0
## 5070   0   0   0   0   0   0
```



```
data.df$daily <- rowSums(data.df[, 4:27])
```



```
hist(data.df$daily, main="                ", xlab="    ")
```



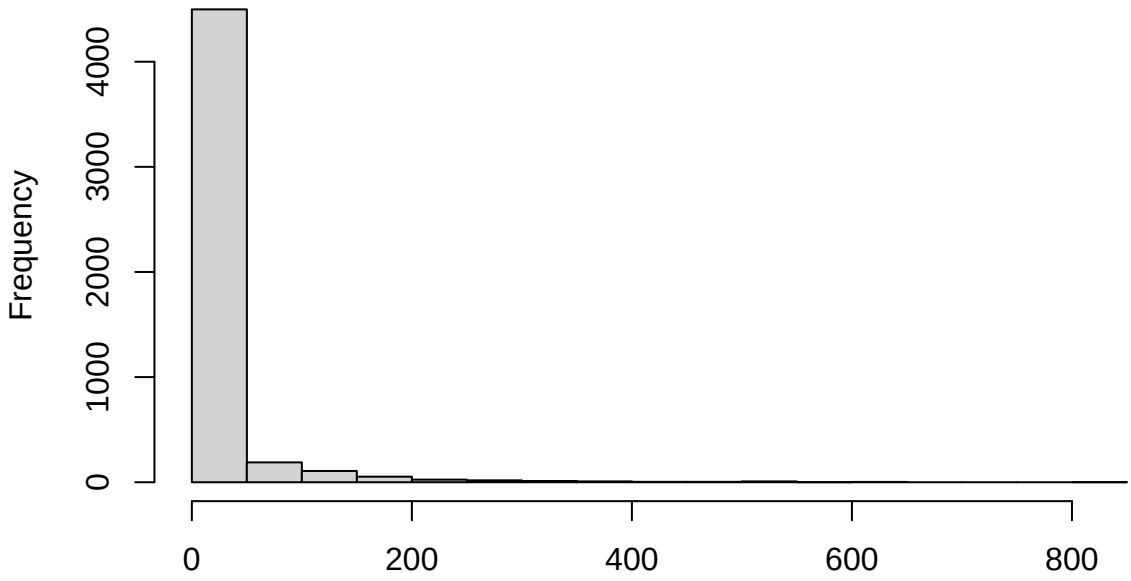
##

```
fixed.df <- data.df
fixed.df$daily[fixed.df$daily < 0] <- NA
```

##

```
hist(fixed.df$daily, main="              ", xlab="    ")
```

....



.....

##

```
v <- c("4", "8", "15", "16", "23", "42")
max(v)  #                   (                )
```

```
## [1] "8"
```

```
sort(v) #          (         )
```

```
## [1] "15" "16" "23" "4"  "42" "8"
```

```
# sum(v)    :               (     sum                    )
```

##

```
v2 <- c(5, 7, 12)
v2[2] + v2[3]  #           : 7 + 12 = 19
```

```
## [1] 19
```

##

```r
df3 <- data.frame(z1="5", z2=7, z3=12)
df3[1, 2] + df3[1, 3]  #         : 7 + 12 = 19
```

```
## [1] 19
```

##

```r
l4 <- list(z1="6", z2=42, z3="49", z4=126)
l4[[2]] + l4[[4]]  #               : 42 + 126 = 168
```

```
## [1] 168
```

```r
#l4[2] + l4[4]          :
```

##

```r
seq(1, 10000, by = 372)
```

```
##  [1]    1  373  745 1117 1489 1861 2233 2605 2977 3349 3721 4093 4465 4837 5209
## [16] 5581 5953 6325 6697 7069 7441 7813 8185 8557 8929 9301 9673
```

```r
seq(1, 10000, length.out = 50)
```

```
##  [1]     1.0000   205.0612   409.1224   613.1837   817.2449  1021.3061
##  [7]  1225.3673  1429.4286  1633.4898  1837.5510  2041.6122  2245.6735
## [13]  2449.7347  2653.7959  2857.8571  3061.9184  3265.9796  3470.0408
## [19]  3674.1020  3878.1633  4082.2245  4286.2857  4490.3469  4694.4082
## [25]  4898.4694  5102.5306  5306.5918  5510.6531  5714.7143  5918.7755
## [31]  6122.8367  6326.8980  6530.9592  6735.0204  6939.0816  7143.1429
## [37]  7347.2041  7551.2653  7755.3265  7959.3878  8163.4490  8367.5102
## [43]  8571.5714  8775.6327  8979.6939  9183.7551  9387.8163  9591.8776
## [49]  9795.9388 10000.0000
```

##

```r
rep(1:5, times = 3)
```

```
##  [1] 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5
```

```r
rep(1:5, each = 3)
```

```
##  [1] 1 1 1 2 2 2 3 3 3 4 4 4 5 5 5
```