DaigleWk3D1Lab.R

2011home

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## Chris Daigle
## Wk3D1 Lab

# Exercise 1
set.seed(pi)
nor <- rnorm(200,6,9)

nor_mid <- nor[(nor >= 4) & (nor <= 7)]
which((nor >= 4) & (nor <= 7))
```

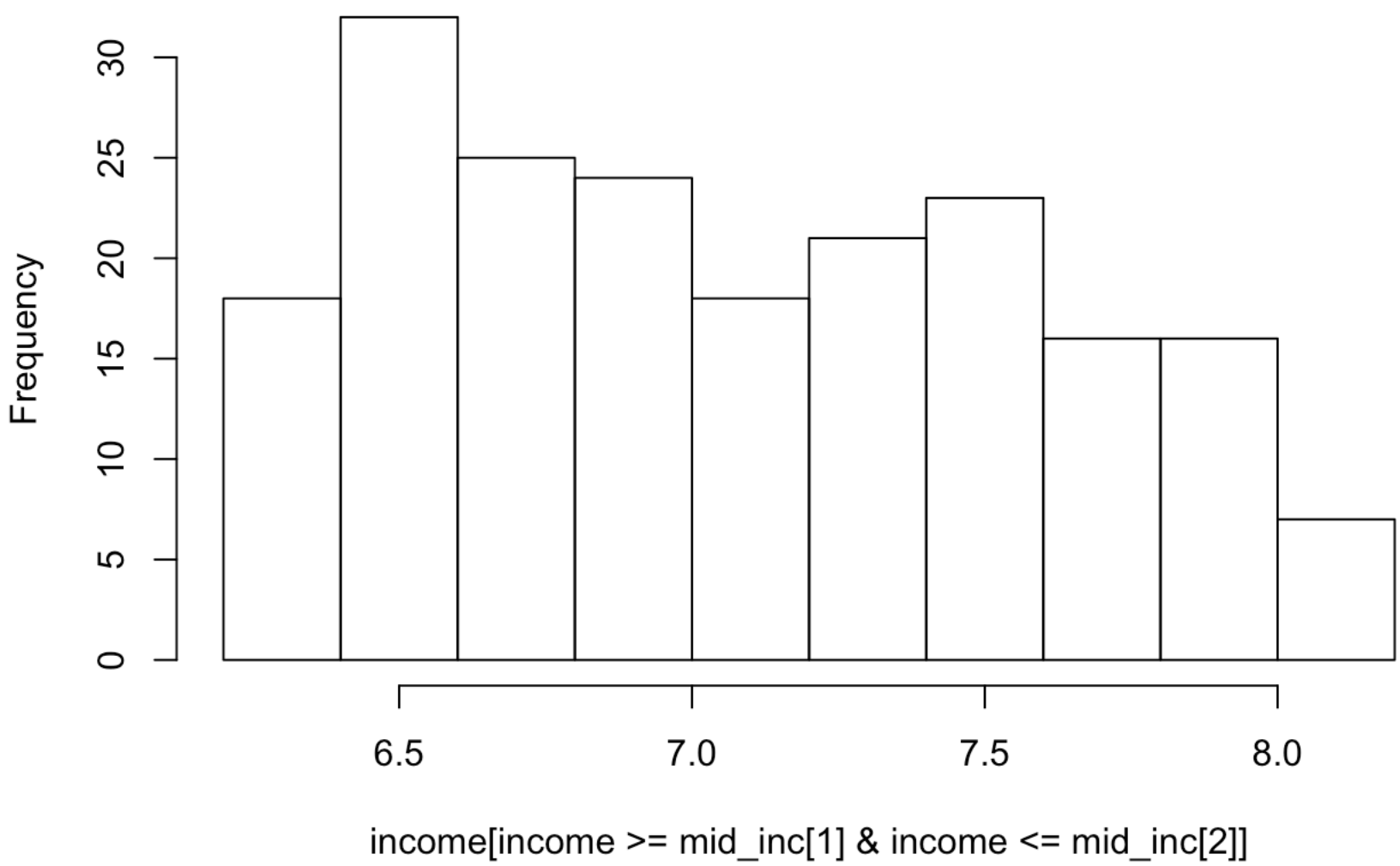
```
##  [1]   6   7  23  29  38  47  71  80  86  96 100 117 120 144 157 197 198
```

```
nor_end <- nor[(nor < 3) | (nor > 9)]

# Exercise 2
set.seed(1)
income <- rchisq(1000, 8)
mid_inc <- quantile(income, probs = seq(0.4, 0.6, 0.2))
print(mid_inc)
```

```
##      40%      60%
## 6.199193 8.099932
```

```
hist(income[income >= mid_inc[1] & income <= mid_inc[2]])
```




```
# Exercise 3
linkedin <- c(16,9,13,5,2,17,14)
facebook <- c(17,7,5,16,8,13,14)
week <- c("Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun")
names(linkedin) <- week
names(facebook) <- week

names(which(linkedin >15))
```

```
## [1] "Mon" "Sat"
```

```
names(which(linkedin <= 5))
```

```
## [1] "Thu" "Fri"
```

```
names(which(linkedin > facebook))
```

```
## [1] "Tue" "Wed" "Sat"
```

```r
# Exercise 4
set.seed(1)
x <- rnorm(1000, 0, 1)
extreme <- (x>1.96) | (x< (-1.96))
extreme[extreme == FALSE] <- 0
cnt_true <- sum(extreme)
print(cnt_true)
```

```
## [1] 68
```

```r
prop_true <- (cnt_true / 1000)*100
prop_true
```

```
## [1] 6.8
```

```r
# Exercise 5
set.seed(pi)
numbers <- sample(1:1000, 1000, replace = TRUE)
even <- (numbers %% 2 == 0)
cnt_even <- sum(even)
cnt_even
```

```
## [1] 538
```

```r
# Exercise 6
salary <- c(54,35,65,34,67,76,100,3,154,44,37,98,254)
name <- c("Tom", "Annie", "John", "Park", "Kim", "Bob", "Julia", "Ben", "Steven", "Ni
ck", "Lee", "Rick", "Don")
names(salary) <- name
salary[which(substr(name,1,1) %in% LETTERS[1:11])]
```

```
## Annie  John   Kim   Bob Julia   Ben   Don
##    35    65    67    76   100     3   254
```