Exercise_P33–34

SoraMatsumoto

2018/6/19

R Markdown

```
library(downloader)
url <-
“https://raw.githubusercontent.com/genomicsclass/dagdata/master/inst/extdata/mice_pheno.csv
(https://raw.githubusercontent.com/genomicsclass/dagdata/master/inst/extdata/mice_pheno.csv)”
filename <- basename(url)
download(url, destfile=filename)
dat <- read.csv(filename)
```

1.

```
library(dplyr)
x <- filter(dat, Sex==“M”, Diet==“chow”) %>% select(Bodyweight) %>% unlist
mean(x)
[1] 30.96381
```

Answer: 30.96381

2.

```
library(rafalib)
popsd(x)
[1] 4.420501
```

Answer: 4.420501

3.

```
set.seed(1); X <- sample(x, 25)
mean(X)
[1] 32.0956
```

Answer: 32.0956

4.

```
library(dplyr)
y <- filter(dat, Sex==“M”, Diet==“hf”) %>% select(Bodyweight) %>% unlist
mean(y)
[1] 34.84793
```

Answer: 34.84793

5.

```
library(rafalib)
popsd(y)
[1] 5.574609
```

Answer: 5.574609

6.

```
set.seed(1); Y <- sample(y, 25)
mean(Y)
[1] 34.768
```

Answer: 34.768

7.

```
abs(abs(mean(y)-mean(x)) - abs(mean(Y)-mean(X)))
[1] 1.211716
```

Answer: 1.211716

8.

```
x <- filter(dat, Sex==“F”, Diet==“chow”) %>% select(Bodyweight) %>% unlist
mean(x)
[1] 23.89338
```

```
popsd(x)
[1] 3.416438
```

```
set.seed(1); X <- sample(x, 25)
mean(X)
[1] 23.1692
```

```
y <- filter(dat, Sex==“F”, Diet==“hf”) %>% select(Bodyweight) %>% unlist
mean(y)
[1] 26.2689
```

```
popsd(y)
[1] 5.06987
```

```
set.seed(1); Y <- sample(y, 25)
mean(Y)
[1] 26.2812
```

```
abs(abs(mean(y)-mean(x)) - abs(mean(Y)-mean(X)))
[1] 0.7364828
```

Answer: 0.7364828

9.

Answer: A