Using R Chapter1 HW

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## Quizes

### Quiz 1-1

#1.   
1 + 2 \* (3 + 4)

## [1] 15

#2.   
4 \*\*3 + 3 \*\*2 + 1

## [1] 74

## as same as the below  
4 ^3 + 3^2 + 1

## [1] 74

#3  
sqrt((4+3)\*(2+1))

## [1] 4.582576

#4  
((1+2)/(3+4))^2

## [1] 0.1836735

### Quiz 1-2

#1  
(2 + 3) - 4

## [1] 1

#2  
2 + (3 \* 4)

## [1] 14

#3  
(2/3)/4

## [1] 0.1666667

#4  
2^(3^4)

## [1] 2.417852e+24

### Quiz 1-3

(1 + 2 \* 3^4) / (5/6 - 7)

## [1] -26.43243

### Quiz 1-4

(0.25 - 0.2) / sqrt(0.2 \* (1 - 0.2) / 100)

## [1] 1.25

### Quiz 1-5

a <- 2  
b <- 3  
c <- 4  
d <- 5  
  
a \* b \* c \* d

## [1] 120

### Quiz 1-6: last value is 1770

data(rivers)  
  
rivers

## [1] 735 320 325 392 524 450 1459 135 465 600 330 336 280 315 870  
## [16] 906 202 329 290 1000 600 505 1450 840 1243 890 350 407 286 280  
## [31] 525 720 390 250 327 230 265 850 210 630 260 230 360 730 600  
## [46] 306 390 420 291 710 340 217 281 352 259 250 470 680 570 350  
## [61] 300 560 900 625 332 2348 1171 3710 2315 2533 780 280 410 460 260  
## [76] 255 431 350 760 618 338 981 1306 500 696 605 250 411 1054 735  
## [91] 233 435 490 310 460 383 375 1270 545 445 1885 380 300 380 377  
## [106] 425 276 210 800 420 350 360 538 1100 1205 314 237 610 360 540  
## [121] 1038 424 310 300 444 301 268 620 215 652 900 525 246 360 529  
## [136] 500 720 270 430 671 1770

### Quiz 1-7

library(UsingR)

## Loading required package: MASS

## Loading required package: HistData

## Loading required package: Hmisc

## Loading required package: lattice

## Loading required package: survival

## Loading required package: Formula

## Loading required package: ggplot2

##   
## Attaching package: 'Hmisc'

## The following objects are masked from 'package:base':  
##   
## format.pval, units

##   
## Attaching package: 'UsingR'

## The following object is masked from 'package:survival':  
##   
## cancer

max(exec.pay)

## [1] 2510

summary(exec.pay)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## 0.00 14.00 27.00 59.89 41.50 2510.00

### Quiz 1-8

mean(exec.pay)

## [1] 59.88945

min(exec.pay)

## [1] 0

max(exec.pay)

## [1] 2510

### Quiz 1-9

Trimmed mean is slightly smaller than the mean without any statistical treatment. Because trimmed mean dropped 10% of extreme values. Before adopting the trimming treatment, the maximum value was 2510.

mean(exec.pay)

## [1] 59.88945

mean(exec.pay, trim=0.10)

## [1] 29.96894

### Quiz 1-10 : Three variables are Tree, age, and circumference

data(Orange)  
names(Orange)

## [1] "Tree" "age" "circumference"

### Quiz 1-11 : 922.1429

#1  
mean(Orange$age)

## [1] 922.1429

### Quiz 1-12 : 214

max(Orange$circumference)

## [1] 214