Rworksheets_MAMINTA#2

```r
#1.
x <- -5:5
x
```

```
##  [1] -5 -4 -3 -2 -1  0  1  2  3  4  5
```

```r
x <- 1:7
x
```

```
## [1] 1 2 3 4 5 6 7
```

```r
#2.
seq(1, 3, by=0.2)
```

```
##  [1] 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0
```

```r
#3.
ages <- c(34, 28, 22, 36, 27, 18, 52, 39, 42, 29, 35, 31, 27,
22, 37, 34, 19, 20, 57, 49, 50, 37, 46, 25, 17, 37, 43, 53, 41, 51, 35,
24,33, 41, 53, 40, 18, 44, 38, 41, 48, 27, 39, 19, 30, 61, 54, 58, 26,
18)

print(ages[3])
```

```
## [1] 22
```

```r
print(ages[c(2, 4)])
```

```
## [1] 28 36
```

```r
print(ages[-1])
```

```
##  [1] 28 22 36 27 18 52 39 42 29 35 31 27 22 37 34 19 20 57 49 50 37 46 25 17 37
## [26] 43 53 41 51 35 24 33 41 53 40 18 44 38 41 48 27 39 19 30 61 54 58 26 18
```

```r
#4.
x <- c("first"=3, "second"=0, "third"=9)
x
```

```
##  first second  third
##      3      0      9
```

```r
x[c("first", "third")]
```

```
## first third
##     3     9
```

```r
#The Output shows that the value is 3 and 9.

#5. Create a sequence x from -3:2.
x <- -3:2
x
```

```
## [1] -3 -2 -1  0  1  2
```

```r
x[2] <- 0
x
```

```
## [1] -3  0 -1  0  1  2
```

```r
#The output shows that [2] was replaced by 0.

#6. *The following data shows the diesel fuel purchased by Mr. Cruz.
Month <- c("Jan", "Feb", "March" ,"April" , "May", "June")
Priceperliter <- c(52.50, 57.25, 60.00, 65.00, 74.25, 54.00)
Liters <- c(25, 30, 40, 50, 10, 45)

fuel <- data.frame(Month, Priceperliter, Liters)
fuel
```

```
##    Month Priceperliter Liters
## 1    Jan         52.50     25
## 2    Feb         57.25     30
## 3 March         60.00     40
## 4 April         65.00     50
## 5   May         74.25     10
## 6  June         54.00     45
```

```r
ave <- weighted.mean(Liters, Priceperliter)
ave
```

```
## [1] 32.65152
```

```r
#The average fuel is [1] 32.65152

#7.
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
```

```r
# a. Type "rivers" in your R console. Create a vector data with 7
#elements, containing the number of elements (length) in rivers,
#their sum (sum), mean (mean), median (median), variance (var)
#standard deviation (sd), minimum (min) and maximum (max).
data <- c(
  length(rivers),
  sum(rivers),
  mean(rivers),
  median(rivers),
  var(rivers),
  sd(rivers),
  min(rivers),
  max(rivers)
)
data
```

```
## [1]    141.0000  83357.0000    591.1844    425.0000 243908.4086    493.8708
## [7]    135.0000   3710.0000
```

```r
#b. What are the results?
#[1]    141.0000  83357.0000    591.1844    425.0000 243908.4086    493.8708    135.0000   3710.0000
```

```r
#8.
ranking <- 1:25

celebrity <- c(
  "Tom Cruise","Rolling Stones","Oprah Winfrey",
  "U2","Tiger Woods","Steven Spielberg",
  "Howard Stern","50 Cent","Cast of the Sopranos",
  "Dan Brown","Bruce Springsteen",
  "Donald Trump","Muhammad Ali","Paul McCartney",
  "George Lucas","Elton John",
  "David Letterman","Phil Mickelson","J.K. Rowling",
  "Brad Pitt","Peter Jackson",
  "Dr. Phil McGraw","Jay Lenon","Celine Dion","Kobe Bryant"
)

pay <- c(
  67,90,225,110,90,332,302,41,52,88,55,44,55,
  40,233,34,40,47,75,25,39,45,32,40,31
)

# Combine into a data frame for readability
forbes <- data.frame(Ranking=ranking, Celebrity=celebrity, Pay=pay)
forbes
```

```
##    Ranking               Celebrity Pay
## 1         1             Tom Cruise  67
## 2         2          Rolling Stones  90
## 3         3           Oprah Winfrey 225
## 4         4                      U2 110
## 5         5             Tiger Woods  90
## 6         6        Steven Spielberg 332
## 7         7            Howard Stern 302
## 8         8                 50 Cent  41
## 9         9 Cast of the Sopranos  52
## 10       10               Dan Brown  88
## 11       11       Bruce Springsteen  55
## 12       12            Donald Trump  44
## 13       13            Muhammad Ali  55
## 14       14           Paul McCartney  40
## 15       15            George Lucas 233
## 16       16               Elton John  34
## 17       17          David Letterman  40
## 18       18           Phil Mickelson  47
## 19       19             J.K. Rowling  75
## 20       20                Brad Pitt  25
## 21       21            Peter Jackson  39
## 22       22         Dr. Phil McGraw  45
## 23       23               Jay Lenon  32
## 24       24              Celine Dion  40
## 25       25              Kobe Bryant  31
```

```r
#Modifying
forbes[forbes$Celebrity == "J.K. Rowling", ]
```

```
##    Ranking    Celebrity Pay
## 19      19 J.K. Rowling  75
```

```r
forbes[forbes$Celebrity == "J.K. Rowling", "Ranking"] <- 15
forbes[forbes$Celebrity == "J.K. Rowling", "Pay"] <- 90
forbes[forbes$Celebrity == "J.K. Rowling", ]
```

```
##    Ranking    Celebrity Pay
## 19      15 J.K. Rowling  90
```

```r
#INTERPRETATION

#The Forbes dataset shows the 25 most powerful celebrities ranked by their
#influence and annual earnings. After modification, J.K. Rowling's ranking
#changed from 19th to 15th, and her annual pay increased from 75 million to 90
#million USD. This adjustment places her closer to top-earning celebrities such
#as George Lucas (233 million) and Oprah Winfrey (225 million), highlighting
#her strong financial success and influence in comparison with other major
#figures in entertainment, sports, and media.
```