

Rworksheets_MAMINTA#2

```
#1.  
x <- -5:5  
x  
  
## [1] -5 -4 -3 -2 -1  0  1  2  3  4  5  
  
x <- 1:7  
x  
  
## [1] 1 2 3 4 5 6 7  
  
#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  
  
#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  
  
print(ages[c(2, 4)])  
  
## [1] 28 36  
  
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  
  
#4.  
x <- c("first"=3, "second"=0, "third"=9)  
x  
  
## first second third  
##      3        0       9
```

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

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

#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
```

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

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

#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
```

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

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

#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

```

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

```

#b. What are the results?

```

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

```

#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

```

#Modifying

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

```

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

```

```

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

```

#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.