Worksheet #2

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```
#1.
y <- -5:5
y
```

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

```
#2.
x <- 1:7
x
```

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

```
#3.
age <- 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)
age [3]
```

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

```
age [c(2,4)]
```

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

```
age [-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.
z <- c("first"=3, "second"=0, "third"=9)
names(z)
```

```
## [1] "first"  "second" "third"
```

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

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

```r
# names() in R is a function where only the labels are extracted and not the values of those labels
```

```r
#5.
a <- -3:2
a[2] <- 0
a
```

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

```r
#6.
Month <- c("Jan", "Feb", "Mar", "Apr", "May", "Jun")
Price_per_liter <- c(52.50, 57.25, 60.00, 65.00, 74.25, 54.00)
Purchase_quantity <- c(25, 30, 40, 50, 10, 45)
dataframe <- data.frame (Month, Price_per_liter, Purchase_quantity)
dataframe
```

```
##   Month Price_per_liter Purchase_quantity
## 1   Jan           52.50                25
## 2   Feb           57.25                30
## 3   Mar           60.00                40
## 4   Apr           65.00                50
## 5   May           74.25                10
## 6   Jun           54.00                45
```

```r
Fuel <- weighted.mean(x = Price_per_liter, w = Purchase_quantity)
Fuel
```

```
## [1] 59.2625
```

```r
#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
elements <- c(length(rivers), sum(rivers), mean(rivers), median(rivers), var(rivers),
sd(rivers), min(rivers), max(rivers))
elements
```

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

```r
#8.
Power <- 1:25
Celebrity <- c("Tom Cruise", "Rolling Stones", "Oprah Winfrey", "U2", "Tiger Woods", "Steven Spielberg"
Pay <- c(67, 90, 225, 110, 90, 332, 302, 41, 52, 88, 55, 44, 55, 40, 233, 34, 40, 47, 75, 25, 39, 45, 3
jk <- which(Celebrity == "J.K Rowling")
Power[jk] <- 15
Pay[jk] <- 90
celebrity_df <- data.frame(Power, Celebrity, Pay)
celebrity_df[jk, ]
```

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

```r
# The data present is about the influence and rankings of celebrities
```