Untitled

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```
  2 + 2
```

```
## [1] 4
```

#1.a

```
x<- -5:5
  print(x)
```

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

#1.b

```
  x <- 1:7

print(x)
```

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

#2.a

```
   seq(1, 3, by=0.2) # specify step size
```

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

```
library(MASS)
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,
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
```

```
   names(x)<- c("first"=3, "second"=0, "third"=9)
     x [c("first", "third")]
```

```
## <NA> <NA>
##   NA   NA
```

```
     print(x)
```

```
##    3    0    9 <NA> <NA> <NA> <NA>
##    1    2    3    4    5    6    7
```

```r
x<- -3:2
  print(x)
```

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

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

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

```r
ages <- c(4, 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)
thirdage <- ages[3]
print (thirdage)
```

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

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

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

```r
ages <- c(4, 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)
all_but_one <- ages[c(2:50)]
print (all_but_one)
```

```
##  [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
x <- c(3, 0, 9)
names(x) <- c("first", "second", "third")
x[c("first", "third")]
```

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

```r
x <- c(-3:2)
x[2] <- 0
x
```

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

```r
month <- c("Jan", "Feb", "March", "Apr", "May", "June")
price <-c(52.50, 57.25, 60.00, 65.00, 74.25, 54.00)
purchase_Quantity <-c(25, 30, 40, 50, 10, 45)

fuel_purchase <- data.frame(month, price, purchase_Quantity)
fuel_purchase
```

```
##   month price purchase_Quantity
```

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

```
average_fuel <- weighted.mean(price, purchase_Quantity)
average_fuel
```

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

```
data <- c(length(rivers), sum(rivers), mean(rivers), median(rivers), var(rivers), sd(rivers), min(river
data
```

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