

Rworksheet#2_sicabalo

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###Worksheet 2

#1.

#a.

```
operator <- seq(-5, 5)
operator
```

```
#R code: operator <- seq(-5, 5)
#operator
```

```
#Output: [1] -5 -4 -3 -2 -1 0 1 2 3 4 5
#Answer: It displayed the a sequence from -5 to 5.
```

#b.

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

#Answer: The value of x are 1, 2, 3, 4, 5, 6, 7.

#2.

#a.

```
seq(1, 3, by=0.2)
```

```
#R code: seq(1, 3, by=0.2)
```

```
#Code: [1] 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0
#Anser: It created a sequence from 1 to 3 by 0.2. It adds 0.2 until it reaches to 3.
```

#3.

#a. Access 3rd element, what is the value?

```
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)
ages
ages[3]
```

#Anwser: The value of the 3rd element is 22.

#b. Access 2nd and 4th element, what are the values?

```
ages[2]
ages[4]
```

#Answer: The values of the 2nd and 4th element are 28 and 36.

#c. Access all but the 1st element is not included. Write the R code and its output.

```
ages
ages[2:50]
```

#Answer:

#4.

#a.

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

#The output is displaying first and third which is 3 and 9.

#b.

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

#Output: first third

```
#      3      9
```

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

#a. Modify 2nd element and change it to 0;

```
x <- seq(-3,2)
```

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

```
x
```

#Describe the output.

#The second number will change to zero.

#b. Write the code and its output.

```
x <- seq(-3,2)
```

```
x
```

```
#x[2]
```

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

```
#[1] -2
```

*#6. *The following data shows the diesel fuel purchased by Mr. Cruz.*

```
month <- c("January", "February", "March", "April", "May", "June")
```

```
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)
```

#a. Create a data frame for month, price per liter (php) and purchase-quantity (liter).

#Write the codes.

```
data_frame <- data.frame(month, price_per_liter, purchase_quantity)
```

```
data_frame
```

#b. What is the average fuel expenditure of Mr. Cruz from Jan to June? Note: Use weighted.mean(liter, p

```
weighted.mean(price_per_liter, purchase_quantity)
```

#7.

#a.

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

#[1]	141.0000	83357.0000	591.1844	425.0000	243908.4086
#[6]	493.8708	135.0000	3710.0000		

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

power