**R Programming Basic Task-1**

1. Vector Recycling:

> 1:6 + 1:3

## 2 4 6 5 7 9

1. Inner Multiplication:

> 1:4 %\*%1:4

## 30

1. Outer Multiplication:

> 1:4 %o% 1:4

## [,1] [,2] [,3] [,4]

## [1,]1 2 3 4

## [2,]2 4 6 8

## [3,]3 6 9 12

## [4,]4 8 12 16

1. Functions:
2. sample()

> coin <- 1:2

> sample(coin, size = 1)

## 2

> sample(coin, size = 1)

## 2

> sample(coin, size = 1)

## 1

1. seq()

> x <- seq(from = 1, to = 10)

> x

## 1 2 3 4 5 6 7 8 9 10

> x <- seq(from = 1, to = 10, by = 3)

> x

## 1 4 7 10

> x <- seq(from = 1, to = 5, length.out = 9)

> x

## 1 1.5 2 2.5 3 3.5 4 4.5 5

1. rep()
2. round()

> round(2.9132)

## 3

1. factorial()

> factorial(5)

## 120

1. is()

> die <- 1:6

> is.vector(die)

## TRUE

> is.integer(3.14)

## FALSE

1. mean()

> mean(1:4)

## 2.5

1. set.seed()

> set.seed(20)

> sample(5)

## 20 21 22 23 24

> set.seed(20)

> rnorm(5)

## 20 21 22 23 24

1. Subset:

> x <- data.frame( "ID" = 1:26, "Name" = c("A", "B", "C", ..., "Z"), "Age" = c(18:30), "Batch" = 1:9)

> subset(x, Batch = 4)

## ID Name Age Batch

## 9 I 20 4

## 10 J 19 4

## 11 K 20 4

## 12 L 22 4

1. Calculate BMI

> print(''Please enter your weight in kg : ")

> m <- readline()

> m <- as.integer(m)

> print("Please enter your height in meter : ")

> h <- readline()

> h <- as.numeric(h)

> h2 <- h \* h

> bmi <- m/h2

> round(bmi)

1. Function to Calculate BMI

> BMI <- function(m, h){

h2 <- h \* h

bmi <- m/h2

return(bmi)

}

> print(round(BMI(m=75, h=1.71)))

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