Lab Assignment-1

Name: Khushi Prasad
SubGroup: 3CO20
Roll No.: 102183044
Subject: Data Science Fundamentals

Q1. Assign and print the values 23.4, 45 and 678 to the variables A, B, C.
CODE:

```
2  my_list<-list(A=23.4,B=45,C=678)
3  print(my_list)
```

OUTPUT:

```
$A
[1] 23.4

$B
[1] 45

$C
[1] 678
```

Q2. Display the entire variable you have created on the screen.
CODE:

```
6  print(my_list)
```

OUTPUT:

```
$A
[1] 23.4

$B
[1] 45

$C
[1] 678
```

Q3. Remove the variable C and display the list.
CODE:

```
9  my_list[-3]
```

OUTPUT:

```
$A
[1] 23.4

$B
[1] 45
```

Q4. Create a comment “I am learning R”
CODE:

```
12  # I am learning R
```

OUTPUT:

```
> # I am learning R
```

Q5. Create strings firstname and lastname as “MyName” and “MySurname”
CODE:

```
15  MyName<-"Khushi"
16  MySurname<-"Prasad"
17  print(paste(MyName,MySurname))
```

OUTPUT:

```
[1] "Khushi Prasad"
```

Q6. Create the variable that can hold a value as 0 or 1.
CODE:

```
20  n=FALSE
21  n=ifelse(n=="TRUE",1,0)
22  n
```

OUTPUT:

```
[1] 0
```

Q7. Perform the operation as +, -, * and / on variables A, B, C together.
CODE:

```
25  A <- 23.4
26  B <- 45
27  C <- 678
28  print(A+B+C)
29  print(A-B-C)
30  print(A*B*C)
31  print(A/B/C)
```

OUTPUT:

```
> print(A+B+C)
[1] 746.4
> print(A-B-C)
[1] -699.6
> print(A*B*C)
[1] 713934
> print(A/B/C)
[1] 0.0007669617
```

Q8. Apply the following functions on some values: Exp(), log(), log10(), log2(), pi, sqrt()
CODE:

```
35  exp(1)
36  log(10)
37  log10(1000)
38  log2(32)
39  pi
40  sqrt(121)
```

OUTPUT:

```
> exp(1)
[1] 2.718282
> log(10)
[1] 2.302585
> log10(1000)
[1] 3
> log2(32)
[1] 5
> pi
[1] 3.141593
> sqrt(121)
```

Q9. Write the statement to solve the following expressions:

1. 23 + (4.5 * 2.3) / 10
2. 456 / 12 – log(90)
3. Exp(5) + 12 / (5 ^ 6)
4. sqrt(45)*12/3

CODE:

```
# 1
23+(4.5*2.3)/10
# 2
456/12-log(90)
# 3
exp(5)+12/(5^6)
# 4
sqrt(45)*12/3
```

OUTPUT:

```
> # 1
> 23+(4.5*2.3)/10
[1] 24.035
> # 2
> 456/12-log(90)
[1] 33.50019
> # 3
> exp(5)+12/(5^6)
[1] 148.4139
> # 4
> sqrt(45)*12/3
[1] 26.83282
```