ASSIGNMENT 1

1)

```
print("Enter a vector: ")
vector1 = scan()
print("Enter another of the same dimensions: ")
vector2 = scan()
ifelse(length(vector1) != length(vector2),print("Dimension
error"), print(vector1+vector2))
```

```
> source("~/assignment1.R")
[1] "Enter a vector: "
1: 1 2 -2 3
5:
Read 4 items
[1] "Enter another of the same dimensions: "
1: 6 -2 3 0
5:
Read 4 items
[1] 7 0 1 3
> source("~/assignment1.R")
[1] "Enter a vector: "
1: 1 2 3
4:
Read 3 items
[1] "Enter another of the same dimensions: "
1: 4 5 -2 8
5:
Read 4 items
[1] "Dimension error"
>
```

2)

```
#SUM, MEAN, PRODUCT OF VECTOR
print("Enter a vector: ")
vector1 = scan()

cat("SUM: ", sum(vector1))
cat("MEAN: ", mean(vector1))
cat("PRODUCT: ", prod(vector1))
```

```
> #SUM, MEAN, PRODUCT OF VECTOR
> print("Enter a vector: ")
[1] "Enter a vector: "

> vector1 = scan()
1: 22 4 7 18
5:
Read 4 items

> cat("SUM: ", sum(vector1))
SUM:  51
> cat("MEAN: ", mean(vector1))
MEAN:  12.75
> cat("PRODUCT: ", prod(vector1))
PRODUCT:  11088
>
```

3)

```
#SORTING
print("Enter a vector: ")
vector1 = scan()
bool = as.integer(readline(prompt = "Enter 1 to sort in
ascending 0 for descending: "))

if(bool == 0){
  cat("SORTED VECTOR: ", sort(vector1, decreasing = TRUE))
}else{
  cat("SORTED VECTOR: ", sort(vector1))
}
```

```
> vector1 = scan()
1: -2 99 -12 0 44 -33
7:
Read 6 items

> bool = as.integer(readline(prompt = "Enter 1 to sort in ascending 0 for descending:
"))
Enter 1 to sort in ascending 0 for descending: 1

> if(bool == 0){
+   cat("SORTED VECTOR: ", sort(vector1, decreasing = TRUE))
+ }else{
+   cat("SORTED VECTOR: ", sort(vector1))
+ }
SORTED VECTOR:  -33 -12 -2 0 44 99
```

```
[1] "Enter a vector: "

> vector1 = scan()
1: -2 0 14 88 22 -9
7:
Read 6 items

> bool = as.integer(readline(prompt = "Enter 1 to sort in ascending 0 for descending:
"))
Enter 1 to sort in ascending 0 for descending: 0

> if(bool == 0){
+   cat("SORTED VECTOR: ", sort(vector1, decreasing = TRUE))
+ }else{
+   cat("SORTED VECTOR: ", sort(vector1))
+ }
SORTED VECTOR:  88 22 14 0 -2 -9
```

4)

```
#ODD OR EVEN
num <- as.numeric(readline(prompt = "Enter a number: "))
if(num %% 2 == 0)
{
  cat(num, "is even.")
} else{
  cat(num, "is odd.")
}
```