

5. Problem Statement

1. Please mention true or false for the below statements:

a) Prescriptive Analytics is used to predict the future outcomes

➤ False

b) Base R packages are installed automatically

➤ TRUE

2. What is Recycling of elements in a vector?

➤ When applying an operation to two vectors that requires them to be the same length, R automatically recycles, or repeats, elements of the shorter one, until it is long enough to match the longer Vector.

3. Give an example of recycling of elements.

➤ Suppose we have two Vectors `c(1,2,4)` , `c(6,0,9,10,13)`, where the first one is shorter with only 3 elements. Now if we sum these two, we will get a warning message as follows.

```
> c(1,2,4) + c(6,0,9,10,13)
```

```
[1] 7 2 13 11 15
```

Warning message:

In `c(1, 2, 4) + c(6, 0, 9, 10, 13)` : longer object length is not a multiple of shorter object length

Here R , Sum those Vectors by Recycling or repeating the elements in shorter one, until it is long enough to match the longer one as follows..

```
> c(1,2,4,1,2) + c(6,0,9,10,13)
```

```
[1] 7 2 13 11 15
```