1. **Say True or False for the below statements:**

* **Prescriptive Analytics used to predict the future outcomes?**

**Ans:**

**FALSE**

Predictive Analytics is used to predict future outcomes.

* **Base R packages installed automatically?**

**Ans:**

**FALSE**

We have to install basic R & R studio. Relevant packages will be installed automatically.

1. **What is Recycling of elements in a vector?**

**Ans:**

If your two vectors are not equal in length then the shorter one will be recycled to match the longer vector.

**Recycling** occurs when vector arithmetic is performed on multiple vectors of different sizes. R takes the shorter vector and repeats them until it becomes long enough to match the longer one. When applying an operation to two vectors that requires them to be the same length, R automatically recycles*,* or repeats, the shorter one, until it is long enough to match the longer one.

1. **Give an example of recycling of elements.**

**Ans:**

Answer:

> c(1,2,3,4,5,6) + c(1,3)

[1] 2 4 3 7 6 9

As you can see, the c(1,3) vector repeated itself to form c(1,3,1,3,1,3) so that it could successfully match the previous term.

If the shorter vector is not a vector of the longer one, then a warning message appears, but the operation still takes place.

> c(1,2,3,4,5) + c(1,3)

[1] 2 5 4 7 6

Warning message:

In c(1, 2, 3, 4, 5) + c(1, 3) :

longer object length is not a multiple of shorter object length