

1. Please mention true or false for the below statements:
  - a) Prescriptive Analytics is used to predict the future outcomes
  - b) Base R packages are installed automatically

Ans:-

- a) False - Predictive Analytics is used to predict the future outcomes, while Prescriptive Analytics is used to optimize techniques and suggests what is to be done to optimize results.
- b) True - Base R packages are installed automatically. Example - mtcars, airquality etc.

2. What is Recycling of elements in a vector?

R likes to operate on vectors of the same length, so if it encounters two vectors of different lengths in a binary operation, it merely replicates (recycles) the smaller vector until it is the same length as the longest vector, then it does the operation.

3. Give an example of recycling of elements.

For example if we make two vectors, x and Y, where `x<-(1:10)`, and `y<-(25:30)`,

Now if we bind of x and y columnwise i.e. `cbind(x,y)`, we will find numbers in y column will start to repeat itself.

R script:-

```
x<-(1:10)
```

```
y<-(25:30)
```

```
cbind(x,y)
```