

Answers for Assignment 1

1. a. False

1. b. False

2. If two vectors are of unequal length, the shorter one will be recycled in order to match the longer vector. For example, the following vectors u and v have different lengths, and their sum is computed by recycling values of the shorter vector u

3. For example

$u = c(10, 20, 30)$

$v = c(1, 2, 3, 4, 5, 6, 7, 8, 9)$

$u+v$

➤ 11, 22, 33, 14, 25, 36, 17, 28, 39

Please find below R solution for the recycling example

The screenshot shows the RStudio interface. The script editor contains the following code:

```
1 u <- c(10,20,30)
2 v <- c(1,2,3,4,5,6,7,8,9)
3 u+v
4 |
```

The Environment pane shows the following objects:

| Object | Class | Attributes |
|-----------|---|---------------------------------|
| m | int | [1:2, 1:5] 1 2 3 4 5 6 7 8 9 10 |
| sales | 60 obs. of 14 variables | |
| i | 2L | |
| j | 5L | |
| path2data | "F:\\Rprogram\\sales_pivot_missing.txt" | |
| u | num [1:3] | 10 20 30 |
| v | num [1:9] | 1 2 3 4 5 6 7 8 9 |

The Console shows the following output:

```
~/
Type 'license()' or 'licence()' for distribution details.
R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.
Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.
[workspace loaded from ~/RData]
> ?formals
> u <- c(10,20,30)
> v <- c(1,2,3,4,5,6,7,8,9)
> u+v
[1] 11 22 33 14 25 36 17 28 39
```