

Week 14 Assignment

2024-04-23

```
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr      1.1.4      v readr      2.1.5
## v forcats    1.0.0      v stringr   1.5.1
## v ggplot2    3.4.4      v tibble    3.2.1
## v lubridate  1.9.3      v tidyr     1.3.1
## v purrr      1.0.2
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
##
## Attaching package: 'foreach'
##
##
## The following objects are masked from 'package:purrr':
##
##   accumulate, when
##
## Loading required package: iterators
##
## Loading required package: parallel
```

2. Use apply functions (30 points)

(2a)

```
##           [,1]
## [1,] 1.000000
## [2,] 2.449490
## [3,] 3.316625
## [4,] 4.000000
## [5,] 4.582576
## [6,] 5.099020
```

(2b)

```
##           [,1]
## [1,] 1.000000
## [2,] 2.449490
## [3,] 3.316625
## [4,] 4.000000
## [5,] 4.582576
## [6,] 5.099020
```

3. Use foreach (30 points)

```
## Rows: 500 Columns: 2
## -- Column specification -----
## Delimiter: ","
## chr (1): species
## dbl (1): lengths
##
## i Use 'spec()' to retrieve the full column specification for this data.
## i Specify the column types or set 'show_col_types = FALSE' to quiet this message.
```

(3a)

```
## [1] 24341.68 27017.90 67453.38 22114.19 53884.76 52026.34
```

(3b)

```
## [1] 24341.68 27017.90 67453.38 22114.19 53884.76 52026.34
```

(3c)

```
## [1] 24341.68 27017.90 67453.38 22114.19 53884.76 52026.34
```

4. Forest Change through Time (30 points)

```
## Rows: 266 Columns: 35
## -- Column specification -----
## Delimiter: ","
## chr (2): Country Name, Country Code
## dbl (32): 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, ...
## lgl (1): 2022
##
## i Use 'spec()' to retrieve the full column specification for this data.
## i Specify the column types or set 'show_col_types = FALSE' to quiet this message.
```

(4a)

```
## [1]      0.0 -832420.0      0.0 -275433.8 -132104.7      1.0
```

(4b)

```
## [1]      0.0 -832420.0      0.0 -275433.8 -132104.7      1.0
```

(4c)

```
## [1]      0.0 -832420.0      0.0 -275433.8 -132104.7      1.0
```