RWorksheet_guion#1.Rmd

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1.

```
age <-c(34, 28, 22, 36, 27, 18, 52, 39, 42, 29, 35, 31,
27, 22, 37, 34, 19, 20, 57, 49, 50, 37, 46, 25,
17, 37, 42, 53, 41, 51, 35, 24, 33, 41)
```

a. How many data points?

```
length(age)
```

```
## [1] 34
```

b. Write the R code and its output

Code:

length(age)

Output:

age <-c(34, 28, 22, 36, 27, 18, 52, 39, 42, 29, 35, 31, 27, 22, 37, 34, 19, 20, 57, 49, 50, 37, 46, 25, 17, 37, 42, 53, 41, 51, 35, 24, 33, 41)

2. Reciprocal

```
reciprocal <- 1/age
library("MASS")
fractions(reciprocal)
```

```
##  [1] 1/34 1/28 1/22 1/36 1/27 1/18 1/52 1/39 1/42 1/29 1/35 1/31 1/27 1/22 1/37
## [16] 1/34 1/19 1/20 1/57 1/49 1/50 1/37 1/46 1/25 1/17 1/37 1/42 1/53 1/41 1/51
## [31] 1/35 1/24 1/33 1/41
```

Write the R code and its output

Code:

reciprocal <- 1/age print(reciprocal)

Output: [1] 0.02941176 0.03571429 0.04545455 0.02777778 0.03703704 0.05555556## [7] 0.01923077 0.02564103 0.02380952 0.03448276 0.02857143 0.03225806## [13] 0.03703704 0.04545455 0.02702703 0.02941176 0.05263158 0.05000000## [19] 0.01754386 0.02040816 0.02000000 0.02702703 0.02173913 0.04000000## [25] 0.05882353 0.02702703 0.02380952 0.01886792 0.02439024 0.01960784## [31] 0.02857143 0.04166667 0.03030303 0.024390241

3.

```
new_age <- c(age, 0, age)
print(new_age)
```

```
##  [1] 34 28 22 36 27 18 52 39 42 29 35 31 27 22 37 34 19 20 57 49 50 37 46 25 17
```

```
## [26] 37 42 53 41 51 35 24 33 41  0 34 28 22 36 27 18 52 39 42 29 35 31 27 22 37
## [51] 34 19 20 57 49 50 37 46 25 17 37 42 53 41 51 35 24 33 41
```

What happen to the new_age?

- When new_age is printed, th same values of age is printed, then 0, then the values of age.

4.

```
sort(age)
```

```
##  [1] 17 18 19 20 22 22 24 25 27 27 28 29 31 33 34 34 35 35 36 37 37 37 39 41 41
## [26] 42 42 46 49 50 51 52 53 57
```

Code:

sort(age)

Output:

[1] 17 18 19 20 22 22 24 25 27 27 28 29 31 33 34 34 35 35 36 37 [21] 37 37 39 41 41 42 42 46 49 50 51 52 53 57

5.

```
min(age)
```

```
## [1] 17
```

```
max(age)
```

```
## [1] 57
```

Code:

min(age) max(age)

Output:

[1] 17 [1] 57

6.

```
data <- c(2.4, 2.8, 2.1, 2.5, 2.4, 2.2, 2.5,
2.3, 2.5, 2.3, 2.4, 2.7)
```

```
length(data)
```

```
## [1] 12
```

Code a and Output a:

data <- c(2.4, 2.8, 2.1, 2.5, 2.4, 2.2, 2.5, 2.3, 2.5, 2.3, 2.4, 2.7)

Code b and Output b:

length(data)

[1] 12