Tugas2_123180145

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```r
library(dslabs)
data(murders)

#1
new_names <- as.character(abbreviate(murders$state, minlength = 8))
new_names
```

```
##  [1] "Alabama"  "Alaska"   "Arizona"  "Arkansas" "Californ" "Colorado"
##  [7] "Connctct" "Delaware" "DstrctoC" "Florida"  "Georgia"  "Hawaii"
## [13] "Idaho"    "Illinois" "Indiana"  "Iowa"     "Kansas"   "Kentucky"
## [19] "Louisian" "Maine"    "Maryland" "Msschstt" "Michigan" "Minnesot"
## [25] "Misssspp" "Missouri" "Montana"  "Nebraska" "Nevada"   "NwHmpshr"
## [31] "NewJersy" "NewMexic" "New York" "NrthCrln" "NorthDkt" "Ohio"
## [37] "Oklahoma" "Oregon"   "Pnnsylvn" "RhdIslnd" "SothCrln" "SouthDkt"
## [43] "Tennesse" "Texas"    "Utah"     "Vermont"  "Virginia" "Washngtn"
## [49] "WestVrgn" "Wisconsn" "Wyoming"
```

```r
#2
sum_n <- function(x)
{
  sum(c(1:x))
}
sum_n(5000)
```

```
## [1] 12502500
```

```r
#3
compute_s_n <- function(x)
{
  sum((1:x)^2)
}
compute_s_n(10)
```

```
## [1] 385
```

```r
#4
s_n <- vector("numeric", 25)
m <- 25
for(n in 1:m)
```

```
{
  s_n[n] <- compute_s_n(n)
}
s_n
```

```
## [1]    1    5   14   30   55   91  140  204  285  385  506  650  819 1015 1240
## [16] 1496 1785 2109 2470 2870 3311 3795 4324 4900 5525
```

#5
```
s_n <- sapply(1:m, compute_s_n)
s_n
```

```
## [1]    1    5   14   30   55   91  140  204  285  385  506  650  819 1015 1240
## [16] 1496 1785 2109 2470 2870 3311 3795 4324 4900 5525
```