The results below are generated from an R script.

```
# Assignment: EXERCISE 5.2
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# Date: 2023-07-09

## Install dplyr package
install.packages("dplyr")

## Error in install.packages : Updating loaded packages

## Load dplyr package
library(dplyr)

## Set the working directory to the root of your DSC 520 directory
setwd("C:/Users/21428899/OneDrive-Bellevue University/Documents/GitHub/dsc520")

## Load the `data/Scores.csv` to
Test_scores <- read.csv("data/scores.csv")


## Apply group_by function
grouped <- group_by(Test_scores, Section)

## Apply summarize function
summarize(grouped, avr = mean(Score))

## # A tibble: 2 x 2
##   Section   avr
##   <chr>   <dbl>
## 1 Regular  328.
## 2 Sports   307.

## Apply mutate function
mutate(Test_scores, Count_Score = Count + Score)

##    Count Score Section Count_Score
## 1     10   200  Sports         210
## 2     10   205  Sports         215
## 3     20   235  Sports         255
## 4     10   240  Sports         250
## 5     10   250  Sports         260
## 6     10   265 Regular         275
## 7     10   275 Regular         285
## 8     30   285  Sports         315
## 9     10   295 Regular         305
## 10    10   300 Regular         310
## 11    20   300  Sports         320
## 12    10   305  Sports         315
## 13    10   305 Regular         315
## 14    10   310 Regular         320
## 15    10   310  Sports         320
## 16    20   320 Regular         340
## 17    10   305 Regular         315
## 18    10   315  Sports         325
```

```
## 19    20   320 Regular         340
## 20    10   325 Regular         335
## 21    10   325  Sports         335
## 22    20   330 Regular         350
## 23    10   330  Sports         340
## 24    30   335  Sports         365
## 25    10   335 Regular         345
## 26    20   340 Regular         360
## 27    10   340  Sports         350
## 28    30   350 Regular         380
## 29    20   360 Regular         380
## 30    10   360  Sports         370
## 31    20   365 Regular         385
## 32    20   365  Sports         385
## 33    10   370  Sports         380
## 34    10   370 Regular         380
## 35    20   375 Regular         395
## 36    10   375  Sports         385
## 37    20   380 Regular         400
## 38    10   395  Sports         405
```

```
## Apply filter function
filter(Test_scores, Count == 10)
```

```
##    Count Score Section
## 1     10   200  Sports
## 2     10   205  Sports
## 3     10   240  Sports
## 4     10   250  Sports
## 5     10   265 Regular
## 6     10   275 Regular
## 7     10   295 Regular
## 8     10   300 Regular
## 9     10   305  Sports
## 10    10   305 Regular
## 11    10   310 Regular
## 12    10   310  Sports
## 13    10   305 Regular
## 14    10   315  Sports
## 15    10   325 Regular
## 16    10   325  Sports
## 17    10   330  Sports
## 18    10   335 Regular
## 19    10   340  Sports
## 20    10   360  Sports
## 21    10   370  Sports
## 22    10   370 Regular
## 23    10   375  Sports
## 24    10   395  Sports
```

```
## Apply select function
select(Test_scores, c(Count, Score))
```

```
##    Count Score
## 1     10   200
```

```
## 2     10   205
## 3     20   235
## 4     10   240
## 5     10   250
## 6     10   265
## 7     10   275
## 8     30   285
## 9     10   295
## 10    10   300
## 11    20   300
## 12    10   305
## 13    10   305
## 14    10   310
## 15    10   310
## 16    20   320
## 17    10   305
## 18    10   315
## 19    20   320
## 20    10   325
## 21    10   325
## 22    20   330
## 23    10   330
## 24    30   335
## 25    10   335
## 26    20   340
## 27    10   340
## 28    30   350
## 29    20   360
## 30    10   360
## 31    20   365
## 32    20   365
## 33    10   370
## 34    10   370
## 35    20   375
## 36    10   375
## 37    20   380
## 38    10   395
```

```
## Apply arrange function
arrange(Test_scores, Score)
```

```
##    Count Score Section
## 1     10   200  Sports
## 2     10   205  Sports
## 3     20   235  Sports
## 4     10   240  Sports
## 5     10   250  Sports
## 6     10   265 Regular
## 7     10   275 Regular
## 8     30   285  Sports
## 9     10   295 Regular
## 10    10   300 Regular
## 11    20   300  Sports
## 12    10   305  Sports
```

```
## 13    10   305 Regular
## 14    10   305 Regular
## 15    10   310 Regular
## 16    10   310  Sports
## 17    10   315  Sports
## 18    20   320 Regular
## 19    20   320 Regular
## 20    10   325 Regular
## 21    10   325  Sports
## 22    20   330 Regular
## 23    10   330  Sports
## 24    30   335  Sports
## 25    10   335 Regular
## 26    20   340 Regular
## 27    10   340  Sports
## 28    30   350 Regular
## 29    20   360 Regular
## 30    10   360  Sports
## 31    20   365 Regular
## 32    20   365  Sports
## 33    10   370  Sports
## 34    10   370 Regular
## 35    20   375 Regular
## 36    10   375  Sports
## 37    20   380 Regular
## 38    10   395  Sports

## Load purrr package
library(purrr)

## Using the purrr package - perform 2 functions on your dataset
Test_scores %>% map_dbl(mean)

## Warning in mean.default(.x[[i]], ...):  argument is not numeric or logical:  returning NA

##     Count     Score   Section
##  14.47368 317.50000        NA

Test_scores %>% map_lgl(is.numeric)

##   Count   Score Section
##    TRUE    TRUE   FALSE

# Using cbind on dataset
numeracion <-  1:38
Test_scores <- cbind(Test_scores, numeracion)

# Using rbind on dataset
Newr <-  c(30, 310, "Sports", 39)
Test_scores <- rbind(Test_scores, Newr)

## Split a string, then concatenate the results back together
Positions <- paste(Test_scores$numeracion, Test_scores$Score, sep = "--")
Positions
```

```
##  [1] "1--200"  "2--205"  "3--235"  "4--240"  "5--250"  "6--265"  "7--275"  "8--285"
##  [9] "9--295"  "10--300" "11--300" "12--305" "13--305" "14--310" "15--310" "16--320"
## [17] "17--305" "18--315" "19--320" "20--325" "21--325" "22--330" "23--330" "24--335"
## [25] "25--335" "26--340" "27--340" "28--350" "29--360" "30--360" "31--365" "32--365"
## [33] "33--370" "34--370" "35--375" "36--375" "37--380" "38--395" "39--310"
```

```
strsplit(Positions, split="--")
```

```
## [[1]]
## [1] "1"   "200"
##
## [[2]]
## [1] "2"   "205"
##
## [[3]]
## [1] "3"   "235"
##
## [[4]]
## [1] "4"   "240"
##
## [[5]]
## [1] "5"   "250"
##
## [[6]]
## [1] "6"   "265"
##
## [[7]]
## [1] "7"   "275"
##
## [[8]]
## [1] "8"   "285"
##
## [[9]]
## [1] "9"   "295"
##
## [[10]]
## [1] "10"  "300"
##
## [[11]]
## [1] "11"  "300"
##
## [[12]]
## [1] "12"  "305"
##
## [[13]]
## [1] "13"  "305"
##
## [[14]]
## [1] "14"  "310"
##
## [[15]]
## [1] "15"  "310"
##
## [[16]]
```

```
## [1] "16"  "320"
##
## [[17]]
## [1] "17"  "305"
##
## [[18]]
## [1] "18"  "315"
##
## [[19]]
## [1] "19"  "320"
##
## [[20]]
## [1] "20"  "325"
##
## [[21]]
## [1] "21"  "325"
##
## [[22]]
## [1] "22"  "330"
##
## [[23]]
## [1] "23"  "330"
##
## [[24]]
## [1] "24"  "335"
##
## [[25]]
## [1] "25"  "335"
##
## [[26]]
## [1] "26"  "340"
##
## [[27]]
## [1] "27"  "340"
##
## [[28]]
## [1] "28"  "350"
##
## [[29]]
## [1] "29"  "360"
##
## [[30]]
## [1] "30"  "360"
##
## [[31]]
## [1] "31"  "365"
##
## [[32]]
## [1] "32"  "365"
##
## [[33]]
## [1] "33"  "370"
##
```

```
## [[34]]
## [1] "34"  "370"
##
## [[35]]
## [1] "35"  "375"
##
## [[36]]
## [1] "36"  "375"
##
## [[37]]
## [1] "37"  "380"
##
## [[38]]
## [1] "38"  "395"
##
## [[39]]
## [1] "39"  "310"

### knitr::stitch("C:\\Users\\21428899\\OneDrive-Bellevue University\\Documents\\GitHub\\dsc520\\Exercis
```

The R session information (including the OS info, R version and all packages used):

```
sessionInfo()

## R version 4.3.0 (2023-04-21 ucrt)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 11 x64 (build 22000)
##
## Matrix products: default
##
##
## locale:
## [1] LC_COLLATE=English_United States.utf8  LC_CTYPE=English_United States.utf8
## [3] LC_MONETARY=English_United States.utf8 LC_NUMERIC=C
## [5] LC_TIME=English_United States.utf8
##
## time zone: America/New_York
## tzcode source: internal
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
## [1] purrr_1.0.1 dplyr_1.1.2
##
## loaded via a namespace (and not attached):
##  [1] utf8_1.2.3       R6_2.5.1         xfun_0.39        tidyselect_1.2.0 magrittr_2.0.3
##  [6] glue_1.6.2       tibble_3.2.1     knitr_1.43       pkgconfig_2.0.3  generics_0.1.3
## [11] lifecycle_1.0.3  cli_3.6.1        fansi_1.0.4      vctrs_0.6.3      withr_2.5.0
## [16] compiler_4.3.0   highr_0.10       tools_4.3.0      evaluate_0.21    pillar_1.9.0
## [21] rlang_1.1.1

Sys.time()

## [1] "2023-07-09 23:34:40 EDT"
```