Data Management

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0.1 Introduction

Goal:

- Create an organized dataset that focuses on my variables of interests.

- Create additional variables that I will need to analyze.

Dataset: International Multi-Centre Study of Statistics and Mathematics Anxieties and Related Variables in University Students (the SMARVUS Dataset)

Source: "This large, international dataset contains survey responses from N = 12,570 students from 100 universities in 35 countries, collected in 21 languages. We measured anxieties (statistics, mathematics, test, trait, social interaction, performance, creativity, intolerance of uncertainty, and fear of negative evaluation), self-efficacy, persistence, and the cognitive reflection test, and collected demographics, previous mathematics grades, self-reported and official statistics grades, and statistics module details. Data reuse potential is broad, including testing links between anxieties and statistics/mathematics education factors, and examining instruments' psychometric properties across different languages and contexts." (https://osf.io/mhg94/)

Variables of Interest:

- 'Var1': [Variable description]

1

- 'Var2': [Variable description]

Goals:

- Focus dataset to English speakers and Psychology Majors.

- Create total scores uhn

```
-- 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   3.5.1     v tibble    3.2.1
v lubridate 1.9.4     v tidyr     1.3.1
v purrr     1.0.4
-- 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 becom
```

```
source("loadData.R")
```

```
[1] "Data successfully loaded."
```

```
head(df)
```

```
# A tibble: 6 x 788
  unique_id survey_id country  language incentive participation_context progress
  <chr>     <chr>     <chr>    <chr>    <chr>     <chr>                    <dbl>
1 01057178  airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time     100
2 0300b5f2  airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time     100
3 03f6503b  airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time     100
4 0601d699  airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time      78
5 08b6cb02  airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time     100
6 0903d70d  airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time     100
# i 781 more variables: duration <dbl>, start_date <chr>, end_date <chr>,
#   university <chr>, eligibility_ug <chr>, eligibility_stats <chr>,
#   degree_major <chr>, degree_minor <chr>, degree_level_maths <chr>,
#   degree_level_maths_specify <chr>, degree_year <chr>, age <chr>,
#   gender <chr>, spld <chr>, attention_amnesty <chr>, Q7.1_1 <dbl>,
#   Q7.1_2 <dbl>, Q7.1_3 <dbl>, Q7.1_4 <dbl>, Q7.1_5 <dbl>, Q7.1_6 <dbl>,
#   Q7.1_7 <dbl>, Q7.1_8 <dbl>, Q7.1_9 <dbl>, Q7.1_10 <dbl>, Q7.1_11 <dbl>, ...
```

```
# Define the file path
# Load the CSV file
#df <- file.path("..", "data", "data.csv") %>%
#  read_csv()


# View the first few rows
#head(df)
```

0.2 Examine data

```
# Review the structure of the data
str(df)
```

```
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 $ language                    : chr [1:12570] "Bahasa Indonesia" "Bahasa Indones
 $ incentive                   : chr [1:12570] "Prize Draw" "Prize Draw" "Prize I
 $ participation_context       : chr [1:12570] "Remotely, in own time" "Remotely
 $ progress                    : num [1:12570] 100 100 100 78 100 100 100 100 100
 $ duration                    : num [1:12570] 5829 2084 5667 2155 3342 ...
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 $ end_date                    : chr [1:12570] "7/4/2021" "1/4/2021" "8/4/2021" '
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 $ eligibility_stats           : chr [1:12570] "Yes" "Yes" "Yes" "Yes" ...
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 $ degree_minor                : chr [1:12570] NA NA NA NA ...
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 $ age                         : chr [1:12570] "18-21" "18-21" "22-25" NA ...
 $ gender                      : chr [1:12570] "Male/Man" "Female/Woman" "Female,
 $ spld                        : chr [1:12570] "I do not have an SpLD" "I do not
 $ attention_amnesty           : chr [1:12570] "Yes" "Yes" "Yes" NA ...
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 $ Q7.1_3                      : num [1:12570] 3 1 3 4 5 2 2 1 5 2 ...
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 $ Q7.1_8      : num [1:12570] 5 2 5 5 5 3 4 4 3 4 ...
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 $ Q7.1_16     : num [1:12570] 2 4 2 4 5 1 2 2 5 3 ...
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 $ Q7.1_18     : num [1:12570] 4 1 5 2 5 1 1 3 4 2 ...
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 $ Q7.2_22     : num [1:12570] 2 4 5 2 2 2 4 1 1 3 ...
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..    deadline_cwk_multi8 = col_character(),
..    deadline_cwk_multi9 = col_character(),
..    deadline_cwk_multi10 = col_character(),
..    scale_cwk_multi1 = col_character(),
..    scale_cwk_multi1_yes_specify = col_character(),
..    scale_cwk_multi1_no_specify = col_character(),
..    scale_cwk_multi2 = col_character(),
..    scale_cwk_multi2_yes_specify = col_character(),
..    scale_cwk_multi2_no_specify = col_character(),
..    scale_cwk_multi3 = col_character(),
..    scale_cwk_multi3_yes_specify = col_character(),
..    scale_cwk_multi3_no_specify = col_character(),
..    scale_cwk_multi4 = col_character(),
..    scale_cwk_multi4_yes_specify = col_character(),
..    scale_cwk_multi4_no_specify = col_character(),
```

```
..    scale_cwk_multi5 = col_character(),
..    scale_cwk_multi5_yes_specify = col_character(),
..    scale_cwk_multi5_no_specify = col_character(),
..    scale_cwk_multi6 = col_character(),
..    scale_cwk_multi6_yes_specify = col_character(),
..    scale_cwk_multi6_no_specify = col_character(),
..    scale_cwk_multi7 = col_character(),
..    scale_cwk_multi7_yes_specify = col_character(),
..    scale_cwk_multi7_no_specify = col_character(),
..    scale_cwk_multi8 = col_character(),
..    scale_cwk_multi8_yes_specify = col_character(),
..    scale_cwk_multi8_no_specify = col_character(),
..    scale_cwk_multi9 = col_character(),
..    scale_cwk_multi9_yes_specify = col_character(),
..    scale_cwk_multi9_no_specify = col_character(),
..    scale_cwk_multi10 = col_character(),
..    scale_cwk_multi10_no_specify = col_character(),
..    tasks_other1 = col_character(),
..    date_other1 = col_character(),
..    scale_other1 = col_character(),
..    scale_other1_yes_specify = col_character(),
..    scale_other1_no_specify = col_character(),
..    info_other1 = col_character(),
..    tasks_other2 = col_character(),
..    date_other2 = col_character(),
..    scale_other2 = col_character(),
..    scale_other2_yes_specify = col_character(),
..    scale_other2_no_specify = col_logical(),
..    info_other2 = col_character(),
..    tasks_other3 = col_character(),
..    date_other3 = col_character(),
..    scale_other3 = col_character(),
..    scale_other3_yes_specify = col_character(),
..    scale_other3_no_specify = col_character(),
..    summative_instructor_written = col_character(),
..    summative_instructor_verbal = col_character(),
..    summative_instructor_grade = col_character(),
..    summative_peer_written = col_logical(),
..    summative_peer_verbal = col_character(),
..    summative_peer_grade = col_character(),
..    summative_none = col_character(),
..    additional_info = col_character(),
..    grade_module_name = col_character(),
```

```
..    grade = col_character(),
..    grade_low = col_character(),
..    grade_high = col_character(),
..    grade_category_notes = col_character()
.. )
- attr(*, "problems")=<externalptr>
```

```
# Summary statistics
summary(df)
```

```
 unique_id          survey_id          country           language
Length:12570      Length:12570      Length:12570      Length:12570
Class :character  Class :character  Class :character  Class :character
Mode  :character  Mode  :character  Mode  :character  Mode  :character




 incentive         participation_context  progress          duration
Length:12570      Length:12570           Min.   : 14.00    Min.   :      61
Class :character  Class :character       1st Qu.: 98.00    1st Qu.:    1282
Mode  :character  Mode  :character       Median :100.00    Median :    1802
                                         Mean   : 90.15    Mean   :    8816
                                         3rd Qu.:100.00    3rd Qu.:    2651
                                         Max.   :100.00    Max.   :4141988

 start_date         end_date          university        eligibility_ug
Length:12570      Length:12570      Length:12570      Length:12570
Class :character  Class :character  Class :character  Class :character
Mode  :character  Mode  :character  Mode  :character  Mode  :character




 eligibility_stats degree_major      degree_minor      degree_level_maths
Length:12570      Length:12570      Length:12570      Length:12570
Class :character  Class :character  Class :character  Class :character
Mode  :character  Mode  :character  Mode  :character  Mode  :character
```

```
degree_level_maths_specify degree_year            age
Length:12570               Length:12570     Length:12570
Class :character           Class :character Class :character
Mode  :character           Mode  :character Mode  :character




   gender              spld            attention_amnesty     Q7.1_1
Length:12570       Length:12570       Length:12570       Min.   :1.000
Class :character   Class :character   Class :character   1st Qu.:2.000
Mode  :character   Mode  :character   Mode  :character   Median :3.000
                                                         Mean   :3.229
                                                         3rd Qu.:4.000
                                                         Max.   :5.000
                                                         NA's   :457
    Q7.1_2            Q7.1_3            Q7.1_4            Q7.1_5
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :3.000    Median :3.000    Median :3.000    Median :3.000
Mean   :2.696    Mean   :2.817    Mean   :2.858    Mean   :2.687
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :458      NA's   :453      NA's   :451      NA's   :457
    Q7.1_6            Q7.1_7            Q7.1_8            Q7.1_9           Q7.1_10
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00    Min.   :1.000
1st Qu.:1.000    1st Qu.:2.000    1st Qu.:3.000    1st Qu.:1.00    1st Qu.:3.000
Median :2.000    Median :3.000    Median :4.000    Median :2.00    Median :4.000
Mean   :2.424    Mean   :3.167    Mean   :3.841    Mean   :2.03    Mean   :3.647
3rd Qu.:3.000    3rd Qu.:4.000    3rd Qu.:5.000    3rd Qu.:3.00    3rd Qu.:5.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00    Max.   :5.000
NA's   :467      NA's   :461      NA's   :454      NA's   :457     NA's   :459
   Q7.1_11           Q7.1_12           Q7.1_13           Q7.1_14
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000    1st Qu.:2.000
Median :3.000    Median :2.000    Median :3.000    Median :3.000
Mean   :2.698    Mean   :2.583    Mean   :3.374    Mean   :2.654
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :461      NA's   :454      NA's   :462      NA's   :459
   Q7.1_15           Q7.1_16           Q7.1_17           Q7.1_18
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:3.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:1.000
```

```
Median :4.000    Median :3.000    Median :2.000    Median :2.000
Mean   :3.607    Mean   :2.711    Mean   :2.362    Mean   :2.461
3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:3.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :452      NA's   :463      NA's   :457      NA's   :460
   Q7.1_19          Q7.1_20          Q7.1_21          Q7.1_22
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000
Median :2.000    Median :3.000    Median :2.000    Median :3.000
Mean   :2.612    Mean   :2.735    Mean   :2.576    Mean   :3.048
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :453      NA's   :458      NA's   :458      NA's   :463
   Q7.1_23          Q7.1_24          Q7.2_1           Q7.2_2
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:2.000    1st Qu.:3.000
Median :2.000    Median :1.000    Median :3.000    Median :4.000
Mean   :2.314    Mean   :1.161    Mean   :3.162    Mean   :3.657
3rd Qu.:3.000    3rd Qu.:1.000    3rd Qu.:4.000    3rd Qu.:5.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :460      NA's   :1306     NA's   :460      NA's   :453
   Q7.2_3           Q7.2_4           Q7.2_5           Q7.2_6
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:3.000    1st Qu.:3.000    1st Qu.:2.000    1st Qu.:3.000
Median :4.000    Median :4.000    Median :3.000    Median :4.000
Mean   :3.577    Mean   :4.025    Mean   :3.167    Mean   :3.687
3rd Qu.:5.000    3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:5.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :462      NA's   :457      NA's   :462      NA's   :457
   Q7.2_7           Q7.2_8           Q7.2_9           Q7.2_10
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:3.000    1st Qu.:2.000    1st Qu.:3.000    1st Qu.:4.000
Median :4.000    Median :3.000    Median :4.000    Median :5.000
Mean   :3.901    Mean   :3.099    Mean   :3.791    Mean   :4.141
3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:5.000    3rd Qu.:5.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :462      NA's   :466      NA's   :455      NA's   :451
   Q7.2_11          Q7.2_12          Q7.2_13          Q7.2_14
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :3.000    Median :3.000    Median :3.000    Median :3.000
Mean   :3.003    Mean   :2.879    Mean   :2.825    Mean   :2.912
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
```

```
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :463      NA's   :460      NA's   :466      NA's   :459
    Q7.2_15          Q7.2_16          Q7.2_17          Q7.2_18
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
Median :1.000    Median :2.000    Median :2.000    Median :2.000
Mean   :1.846    Mean   :2.406    Mean   :2.592    Mean   :2.432
3rd Qu.:2.000    3rd Qu.:3.000    3rd Qu.:4.000    3rd Qu.:3.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :460      NA's   :457      NA's   :467      NA's   :461
    Q7.2_19          Q7.2_20          Q7.2_21          Q7.2_22
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
Median :2.000    Median :2.000    Median :2.000    Median :2.000
Mean   :2.447    Mean   :2.397    Mean   :2.575    Mean   :2.437
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.000    3rd Qu.:3.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :462      NA's   :551      NA's   :556      NA's   :558
    Q7.2_23          Q8.1_1           Q8.1_2           Q8.1_3
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :3.000    Median :3.000    Median :3.000    Median :3.000
Mean   :2.703    Mean   :3.213    Mean   :2.628    Mean   :2.777
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :555      NA's   :451      NA's   :442      NA's   :440
    Q8.1_4           Q8.1_5           Q8.1_6           Q8.1_7
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000
Median :3.000    Median :3.000    Median :2.000    Median :3.000
Mean   :2.741    Mean   :2.619    Mean   :2.474    Mean   :2.862
3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :444      NA's   :448      NA's   :447      NA's   :442
    Q8.1_8           Q8.1_9           Q8.1_10          Q8.1_11
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:3.000    1st Qu.:3.000    1st Qu.:1.000    1st Qu.:2.000
Median :4.000    Median :4.000    Median :1.000    Median :3.000
Mean   :3.762    Mean   :3.622    Mean   :1.947    Mean   :3.366
3rd Qu.:5.000    3rd Qu.:5.000    3rd Qu.:3.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :441      NA's   :447      NA's   :443      NA's   :440
    Q8.1_12          Q8.1_13          Q8.1_14          Q8.1_15          Q8.1_16
```

```
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00     Min.   :1.000
 1st Qu.:2.000    1st Qu.:3.000    1st Qu.:2.000    1st Qu.:1.00     1st Qu.:2.000
 Median :3.000    Median :4.000    Median :3.000    Median :2.00     Median :2.000
 Mean   :2.837    Mean   :3.601    Mean   :2.692    Mean   :2.45     Mean   :2.618
 3rd Qu.:4.000    3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:3.00     3rd Qu.:4.000
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00     Max.   :5.000
 NA's   :446      NA's   :441      NA's   :447      NA's   :441      NA's   :452
    Q8.1_17          Q8.1_18          Q8.1_19          Q8.1_20
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
 1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000    1st Qu.:1.000
 Median :2.000    Median :2.000    Median :3.000    Median :2.000
 Mean   :2.602    Mean   :2.612    Mean   :3.019    Mean   :2.301
 3rd Qu.:3.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:3.000
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
 NA's   :443      NA's   :447      NA's   :439      NA's   :449
    Q8.1_21          Q8.2_1           Q8.2_2           Q8.2_3           Q8.2_4
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00     Min.   :1.000
 1st Qu.:5.000    1st Qu.:2.000    1st Qu.:3.000    1st Qu.:3.00     1st Qu.:3.000
 Median :5.000    Median :3.000    Median :4.000    Median :4.00     Median :4.000
 Mean   :4.788    Mean   :3.067    Mean   :3.659    Mean   :3.51     Mean   :3.971
 3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:5.000    3rd Qu.:5.00     3rd Qu.:5.000
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00     Max.   :5.000
 NA's   :1282     NA's   :446      NA's   :444      NA's   :456      NA's   :455
    Q8.2_5           Q8.2_6           Q8.2_7           Q8.2_8
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
 1st Qu.:2.000    1st Qu.:3.000    1st Qu.:3.000    1st Qu.:2.000
 Median :3.000    Median :4.000    Median :4.000    Median :3.000
 Mean   :3.084    Mean   :3.622    Mean   :3.836    Mean   :3.099
 3rd Qu.:4.000    3rd Qu.:5.000    3rd Qu.:5.000    3rd Qu.:4.000
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
 NA's   :450      NA's   :457      NA's   :447      NA's   :444
    Q8.2_9           Q8.2_10          Q8.2_11          Q8.2_12          Q8.2_13
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00     Min.   :1.000
 1st Qu.:3.000    1st Qu.:3.000    1st Qu.:1.000    1st Qu.:1.00     1st Qu.:1.000
 Median :4.000    Median :4.000    Median :1.000    Median :2.00     Median :2.000
 Mean   :3.717    Mean   :4.029    Mean   :1.602    Mean   :2.15     Mean   :1.977
 3rd Qu.:5.000    3rd Qu.:5.000    3rd Qu.:2.000    3rd Qu.:3.00     3rd Qu.:3.000
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00     Max.   :5.000
 NA's   :453      NA's   :459      NA's   :444      NA's   :446      NA's   :451
    Q8.2_14          Q8.2_15          Q8.2_16          Q8.2_17          Q8.2_18
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00     Min.   :1.000
 1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.00     1st Qu.:1.000
 Median :2.000    Median :2.000    Median :1.000    Median :2.00     Median :2.000
```

```
Mean   :2.191    Mean   :2.368    Mean   :1.783    Mean   :2.36     Mean   :2.603
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:2.000    3rd Qu.:3.00     3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00     Max.   :5.000
NA's   :444      NA's   :455      NA's   :458      NA's   :446      NA's   :457
    Q8.2_19          Q8.2_20          Q8.2_21          Q8.2_22
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:2.000    1st Qu.:2.000
Median :2.000    Median :2.000    Median :3.000    Median :3.000
Mean   :2.351    Mean   :2.382    Mean   :3.152    Mean   :3.181
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:5.000    3rd Qu.:5.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :449      NA's   :459      NA's   :548      NA's   :543
    Q8.2_23          Q8.2_24          Q9.1_1           Q9.1_2
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:1.000
Median :3.000    Median :3.000    Median :2.000    Median :2.000
Mean   :3.212    Mean   :3.223    Mean   :2.206    Mean   :2.111
3rd Qu.:5.000    3rd Qu.:5.000    3rd Qu.:3.000    3rd Qu.:3.000
Max.   :5.000    Max.   :5.000    Max.   :4.000    Max.   :4.000
NA's   :556      NA's   :549      NA's   :1515     NA's   :1511
    Q9.1_3           Q9.1_4           Q9.1_5           Q9.1_6
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
Median :2.000    Median :2.000    Median :2.000    Median :2.000
Mean   :2.393    Mean   :2.353    Mean   :2.296    Mean   :1.855
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:2.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
NA's   :1512     NA's   :1514     NA's   :1512     NA's   :1514
    Q9.1_7           Q9.1_8           Q9.1_9           Q9.1_10
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:2.000
Median :2.000    Median :2.000    Median :2.000    Median :3.000
Mean   :1.907    Mean   :1.943    Mean   :2.346    Mean   :2.724
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
NA's   :1511     NA's   :1517     NA's   :1513     NA's   :1513
    Q9.1_11          Q9.1_12          Q9.1_13          Q9.1_14
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
Median :2.000    Median :2.000    Median :2.000    Median :2.000
Mean   :2.285    Mean   :2.016    Mean   :2.238    Mean   :1.799
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:2.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
```

```
 NA's   :1519    NA's   :1513    NA's   :1510    NA's   :1518
   Q9.1_15         Q9.1_16         Q9.1_17         Q9.1_18         Q9.1_19
 Min.   :1.000   Min.   :1.00   Min.   :1.000   Min.   :1.00   Min.   :1.000
 1st Qu.:1.000   1st Qu.:2.00   1st Qu.:2.000   1st Qu.:1.00   1st Qu.:2.000
 Median :2.000   Median :2.00   Median :2.000   Median :2.00   Median :3.000
 Mean   :1.894   Mean   :2.47   Mean   :2.451   Mean   :1.84   Mean   :2.509
 3rd Qu.:2.000   3rd Qu.:3.00   3rd Qu.:3.000   3rd Qu.:2.00   3rd Qu.:3.000
 Max.   :4.000   Max.   :4.00   Max.   :4.000   Max.   :4.00   Max.   :4.000
 NA's   :1509    NA's   :1510    NA's   :1514    NA's   :1511    NA's   :1515
   Q9.1_20         Q9.1_21         Q9.1_22         Q10.1_1         Q10.1_2
 Min.   :1.000   Min.   :1.000   Min.   :1.00   Min.   :1.000   Min.   :1.000
 1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.00   1st Qu.:1.000   1st Qu.:1.000
 Median :2.000   Median :2.000   Median :1.00   Median :2.000   Median :2.000
 Mean   :2.196   Mean   :1.981   Mean   :1.08   Mean   :2.312   Mean   :2.237
 3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:1.00   3rd Qu.:3.000   3rd Qu.:3.000
 Max.   :4.000   Max.   :4.000   Max.   :4.00   Max.   :4.000   Max.   :4.000
 NA's   :1514    NA's   :1515    NA's   :2328    NA's   :1495    NA's   :1502
   Q10.1_3         Q10.1_4         Q10.1_5         Q10.1_6
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000
 Median :2.000   Median :3.000   Median :3.000   Median :3.000
 Mean   :2.422   Mean   :2.735   Mean   :2.702   Mean   :3.054
 3rd Qu.:3.000   3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.000
 Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.000
 NA's   :1496    NA's   :1496    NA's   :1496    NA's   :1495
   Q10.1_7         Q10.1_8         Q10.1_9         Q10.1_10
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.000
 Median :2.000   Median :2.000   Median :2.000   Median :2.000
 Mean   :2.159   Mean   :2.135   Mean   :1.927   Mean   :1.934
 3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:2.000   3rd Qu.:3.000
 Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.000
 NA's   :1494    NA's   :1495    NA's   :1496    NA's   :1494
   Q10.1_11        Q10.1_12        Q10.1_13        Q10.1_14        Q10.1_15
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.00
 1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:1.00
 Median :2.000   Median :3.000   Median :3.000   Median :2.000   Median :2.00
 Mean   :2.549   Mean   :2.919   Mean   :2.969   Mean   :2.394   Mean   :2.11
 3rd Qu.:3.000   3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:3.000   3rd Qu.:3.00
 Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.00
 NA's   :1495    NA's   :1501    NA's   :1496    NA's   :1491    NA's   :1493
   Q10.1_16        Q10.1_17        Q10.1_18        Q10.1_19        Q10.1_20
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.00   Min.   :1.000
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1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.00    1st Qu.:1.000
Median :2.000    Median :2.000    Median :2.000    Median :2.00    Median :1.000
Mean   :2.065    Mean   :2.027    Mean   :2.112    Mean   :1.89    Mean   :1.821
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:2.00    3rd Qu.:2.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.00    Max.   :4.000
NA's   :1499     NA's   :1503     NA's   :1497     NA's   :1495    NA's   :1498
   Q10.1_21         Q10.1_22         Q10.1_23         Q10.1_24
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:2.000
Median :2.000    Median :1.000    Median :2.000    Median :2.000
Mean   :2.148    Mean   :1.602    Mean   :2.203    Mean   :2.402
3rd Qu.:3.000    3rd Qu.:2.000    3rd Qu.:3.000    3rd Qu.:3.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
NA's   :1498     NA's   :1495     NA's   :1495     NA's   :1497
   Q10.1_25         Q11.1_1          Q11.1_2          Q11.1_3
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :3.000    Median :3.000    Median :3.000    Median :3.000
Mean   :2.899    Mean   :3.047    Mean   :2.952    Mean   :2.951
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :4.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :1498     NA's   :1470     NA's   :1476     NA's   :1475
   Q11.1_4          Q11.1_5          Q11.1_6          Q11.1_7
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :3.000    Median :3.000    Median :3.000    Median :3.000
Mean   :2.952    Mean   :3.058    Mean   :3.241    Mean   :3.213
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :1477     NA's   :1476     NA's   :1476     NA's   :1472
   Q11.1_8          Q11.1_9          Q12.1_1          Q12.1_2          Q12.1_3
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1        Min.   :1.000
1st Qu.:2.000    1st Qu.:3.000    1st Qu.:1.000    1st Qu.:1        1st Qu.:1.000
Median :3.000    Median :3.000    Median :1.000    Median :2        Median :1.000
Mean   :3.262    Mean   :2.977    Mean   :1.763    Mean   :2        Mean   :1.756
3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:2.000    3rd Qu.:3        3rd Qu.:2.000
Max.   :5.000    Max.   :5.000    Max.   :4.000    Max.   :4        Max.   :4.000
NA's   :1475     NA's   :2284     NA's   :1494     NA's   :1496     NA's   :1496
   Q12.1_4          Q12.1_5          Q12.1_6          Q12.1_7          Q12.1_8
Min.   :1.00     Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.00     1st Qu.:2.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000
Median :1.00     Median :3.000    Median :3.000    Median :2.000    Median :3.000
Mean   :1.71     Mean   :2.547    Mean   :3.006    Mean   :2.078    Mean   :2.661
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3rd Qu.:2.00    3rd Qu.:3.000   3rd Qu.:4.000   3rd Qu.:3.000   3rd Qu.:3.000
Max.   :4.00    Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.000
NA's   :1501    NA's   :1493    NA's   :1495    NA's   :1497    NA's   :1494
   Q12.1_9         Q12.1_10        Q12.1_11        Q12.1_12
Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000
Median :2.000   Median :3.000   Median :2.000   Median :2.000
Mean   :2.399   Mean   :2.522   Mean   :2.229   Mean   :2.305
3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:3.000
Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.000
NA's   :1495    NA's   :1492    NA's   :1495    NA's   :1497
   Q12.1_13        Q12.1_14        Q12.1_15        Q12.1_16
Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
1st Qu.:1.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000
Median :2.000   Median :2.000   Median :3.000   Median :3.000
Mean   :1.837   Mean   :2.472   Mean   :2.676   Mean   :2.807
3rd Qu.:2.000   3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:4.000
Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.000
NA's   :1492    NA's   :1493    NA's   :1494    NA's   :1495
   Q12.1_17        Q12.1_18        Q12.1_19        Q12.1_20        Q12.1_21
Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.00    Min.   :1.000
1st Qu.:2.000   1st Qu.:2.000   1st Qu.:1.000   1st Qu.:2.00    1st Qu.:2.000
Median :3.000   Median :2.000   Median :2.000   Median :3.00    Median :3.000
Mean   :2.651   Mean   :2.433   Mean   :2.254   Mean   :2.83    Mean   :2.672
3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:4.00    3rd Qu.:3.000
Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.00    Max.   :4.000
NA's   :1494    NA's   :1493    NA's   :1493    NA's   :1496    NA's   :1499
   Q12.1_22        Q12.1_23        Q12.1_24        Q13.1_1         Q13.1_2
Min.   :1.00    Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
1st Qu.:1.00    1st Qu.:1.000   1st Qu.:1.000   1st Qu.:2.000   1st Qu.:2.000
Median :2.00    Median :2.000   Median :2.000   Median :3.000   Median :3.000
Mean   :2.11    Mean   :2.319   Mean   :2.185   Mean   :2.742   Mean   :2.914
3rd Qu.:3.00    3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:4.000   3rd Qu.:4.000
Max.   :4.00    Max.   :4.000   Max.   :4.000   Max.   :5.000   Max.   :5.000
NA's   :1496    NA's   :1497    NA's   :1496    NA's   :1491    NA's   :1493
   Q13.1_3         Q13.1_4         Q13.1_5         Q13.1_6         Q13.1_7
Min.   :1.000   Min.   :1.00    Min.   :1.000   Min.   :1.000   Min.   :1.000
1st Qu.:2.000   1st Qu.:2.00    1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000
Median :2.000   Median :2.00    Median :3.000   Median :3.000   Median :3.000
Mean   :2.568   Mean   :2.57    Mean   :2.752   Mean   :2.924   Mean   :2.679
3rd Qu.:3.000   3rd Qu.:3.00    3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.000
Max.   :5.000   Max.   :5.00    Max.   :5.000   Max.   :5.000   Max.   :5.000
NA's   :1494    NA's   :1495    NA's   :1491    NA's   :1492    NA's   :1494
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     Q13.1_8          Q13.1_9          Q13.1_10         Q13.1_11         Q13.1_12
 Min.   :1.000   Min.   :1.00    Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:2.000   1st Qu.:1.00    1st Qu.:1.000   1st Qu.:2.000   1st Qu.:2.000
 Median :3.000   Median :2.00    Median :2.000   Median :2.000   Median :2.000
 Mean   :2.615   Mean   :2.33    Mean   :2.351   Mean   :2.417   Mean   :2.532
 3rd Qu.:3.000   3rd Qu.:3.00    3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:3.000
 Max.   :5.000   Max.   :5.00    Max.   :5.000   Max.   :5.000   Max.   :5.000
 NA's   :1491    NA's   :1496    NA's   :1491    NA's   :1496    NA's   :1495
     Q13.1_13         Q13.1_14         Q13.1_15         Q13.1_16
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:2.000   1st Qu.:1.000   1st Qu.:2.000   1st Qu.:2.000
 Median :3.000   Median :2.000   Median :2.000   Median :2.000
 Mean   :2.597   Mean   :2.322   Mean   :2.406   Mean   :2.489
 3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:3.000
 Max.   :5.000   Max.   :5.000   Max.   :5.000   Max.   :5.000
 NA's   :1490    NA's   :1488    NA's   :1496    NA's   :1492
     Q13.1_17         Q14.1_1          Q14.1_2          Q14.1_3
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:2.000   1st Qu.:2.000   1st Qu.:3.000   1st Qu.:2.000
 Median :2.000   Median :3.000   Median :4.000   Median :3.000
 Mean   :2.057   Mean   :2.927   Mean   :3.465   Mean   :2.682
 3rd Qu.:2.000   3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.000
 Max.   :5.000   Max.   :5.000   Max.   :5.000   Max.   :5.000
 NA's   :2304    NA's   :1497    NA's   :1500    NA's   :1500
     Q14.1_4          Q14.1_5          Q14.1_6          Q14.1_7
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:2.000   1st Qu.:2.000   1st Qu.:1.000   1st Qu.:2.000
 Median :3.000   Median :3.000   Median :2.000   Median :3.000
 Mean   :2.974   Mean   :2.702   Mean   :2.527   Mean   :3.008
 3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:3.000   3rd Qu.:4.000
 Max.   :5.000   Max.   :5.000   Max.   :5.000   Max.   :5.000
 NA's   :1497    NA's   :1499    NA's   :1498    NA's   :1498
     Q14.1_8          Q14.1_9          Q14.1_10         Q14.1_11         Q14.1_12
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.00
 1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.00
 Median :3.000   Median :3.000   Median :3.000   Median :3.000   Median :3.00
 Mean   :3.168   Mean   :2.667   Mean   :2.676   Mean   :3.228   Mean   :2.64
 3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.00
 Max.   :5.000   Max.   :5.000   Max.   :5.000   Max.   :5.000   Max.   :5.00
 NA's   :1500    NA's   :1499    NA's   :1496    NA's   :1496    NA's   :1500
     Q15.1_1          Q15.1_2          Q15.1_3          Q15.1_4
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:3.000   1st Qu.:3.000   1st Qu.:4.000   1st Qu.:3.000
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 Median :4.000    Median :3.000    Median :4.000    Median :4.000
 Mean   :3.713    Mean   :3.346    Mean   :3.863    Mean   :3.693
 3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
 NA's   :1471     NA's   :1468     NA's   :1468     NA's   :1465
    Q15.1_5          Q15.1_6          Q15.1_7          Q15.1_8
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
 1st Qu.:3.000    1st Qu.:3.000    1st Qu.:3.000    1st Qu.:3.000
 Median :4.000    Median :4.000    Median :3.000    Median :4.000
 Mean   :3.777    Mean   :3.664    Mean   :3.348    Mean   :3.525
 3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
 NA's   :1464     NA's   :1466     NA's   :1468     NA's   :1466
    Q15.1_9          Q16.1_1          Q16.1_2          Q16.1_3          Q16.1_4
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00
 1st Qu.:4.000    1st Qu.:3.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.00
 Median :4.000    Median :4.000    Median :2.000    Median :2.000    Median :3.00
 Mean   :3.949    Mean   :3.771    Mean   :2.289    Mean   :2.481    Mean   :2.63
 3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.00
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00
 NA's   :2285     NA's   :1485     NA's   :1487     NA's   :1489     NA's   :1487
    Q16.1_5          Q16.1_6          Q16.1_7          Q17.1
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :0.000e+00
 1st Qu.:2.000    1st Qu.:3.000    1st Qu.:2.000    1st Qu.:4.000e+00
 Median :3.000    Median :4.000    Median :2.000    Median :8.000e+00
 Mean   :2.876    Mean   :3.587    Mean   :2.609    Mean   :7.894e+05
 3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:8.000e+00
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :1.552e+09
 NA's   :1486     NA's   :1485     NA's   :1486     NA's   :1575
    Q17.2               Q17.3               Q18.1             crt_check1
 Min.   :0.000e+00   Min.   :0.000e+00   Length:12570       Min.   :       0
 1st Qu.:1.000e+01   1st Qu.:2.000e+01   Class :character   1st Qu.:       2
 Median :5.000e+01   Median :2.000e+01   Mode  :character   Median :       2
 Mean   :9.665e+04   Mean   :5.038e+07                      Mean   :     622
 3rd Qu.:5.000e+01   3rd Qu.:3.900e+01                      3rd Qu.:       3
 Max.   :1.061e+09   Max.   :5.498e+11                      Max.   :6767674
 NA's   :1579        NA's   :1599                           NA's   :1645
  crt_check2         do_block_crt      do_block_big       do_q_crt_1
 Length:12570       Min.   :1.000     Min.   :1.000      Min.   :1.000
 Class :character   1st Qu.:1.000     1st Qu.:1.000      1st Qu.:1.000
 Mode  :character   Median :1.000     Median :2.000      Median :2.000
                    Mean   :1.489     Mean   :1.504      Mean   :1.987
                    3rd Qu.:2.000     3rd Qu.:2.000      3rd Qu.:3.000
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                     Max.   :2.000   Max.   :2.000   Max.   :3.000
                     NA's   :1428    NA's   :1597    NA's   :3442
   do_q_crt_2       do_q_crt_3      math_edu_type      math_edu_type_other
 Min.   :1.000   Min.   :1.000   Length:12570      Length:12570
 1st Qu.:1.000   1st Qu.:1.000   Class :character   Class :character
 Median :2.000   Median :2.000   Mode  :character   Mode  :character
 Mean   :1.995   Mean   :2.018
 3rd Qu.:3.000   3rd Qu.:3.000
 Max.   :3.000   Max.   :3.000
 NA's   :3442    NA's   :3442
 math_edu_grade      math_edu_mths      math_edu_level      math_edu_level_other
 Length:12570      Length:12570      Length:12570      Length:12570
 Class :character   Class :character   Class :character   Class :character
 Mode  :character   Mode  :character   Mode  :character   Mode  :character




 math_edu_grade_yr10 math_edu_grade_yr11_entry math_edu_grade_yr11_int
 Length:12570        Length:12570              Length:12570
 Class :character     Class :character          Class :character
 Mode  :character     Mode  :character          Mode  :character




 math_edu_grade_yr11_adv math_edu_grade_other math_edu_mths_yr10
 Length:12570            Length:12570         Length:12570
 Class :character         Class :character      Class :character
 Mode  :character         Mode  :character      Mode  :character




 math_edu_mths_yr11_entry math_edu_mths_yr11_int math_edu_mths_yr11_adv
 Length:12570             Length:12570           Length:12570
 Class :character          Class :character        Class :character
 Mode  :character          Mode  :character        Mode  :character




 math_edu_mths_other math_edu_primary_level math_edu_grade_grade10
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Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




math_edu_grade_grade11  math_edu_grade_grade12  math_edu_mths_grade10
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




math_edu_mths_grade11  math_edu_mths_grade12  math_edu_grade12_course1
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




math_edu_grade12_course2  math_edu_grade12_course3  math_edu_grade12_course4
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




math_edu_grade12_course5  math_edu_grade12_course6  math_edu_grade12_course7
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




math_edu_grade12_course8  math_edu_grade12_course7_specify
Length:12570        Length:12570
Class :character    Class :character
Mode  :character    Mode  :character
```

```
math_edu_grade12_course8_specify math_edu_grade_grade10a
Length:12570                    Length:12570
Class :character                Class :character
Mode  :character                Mode  :character




math_edu_grade_grade11a math_edu_grade_grade12_course1
Length:12570            Length:12570
Class :character        Class :character
Mode  :character        Mode  :character




math_edu_grade_grade12_course2 math_edu_grade_grade12_course3
Length:12570                   Length:12570
Class :character               Class :character
Mode  :character               Mode  :character




math_edu_grade_grade12_course4 math_edu_grade_grade12_course5
Length:12570                   Length:12570
Class :character               Class :character
Mode  :character               Mode  :character




math_edu_grade_grade12_course6 math_edu_grade_grade12_course7
Length:12570                   Length:12570
Class :character               Class :character
Mode  :character               Mode  :character
```

```
math_edu_grade_grade12_course8 math_edu_mths_grade10a math_edu_mths_grade11a
Length:12570                    Length:12570           Length:12570
Class :character                Class :character       Class :character
Mode  :character                Mode  :character       Mode  :character




math_edu_mths_grade12_course1 math_edu_mths_grade12_course2
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_mths_grade12_course3 math_edu_mths_grade12_course4
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_mths_grade12_course5 math_edu_mths_grade12_course6
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_mths_grade12_course7 math_edu_mths_grade12_course8
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_grade_grade10b math_edu_grade_grade11b math_edu_mths_grade10b
Length:12570            Length:12570            Length:12570
```

```
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_mths_grade11b math_edu_grade_grade10c math_edu_mths_grade10c
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_pre_uni_course1 math_edu_pre_uni_grade1 math_edu_pre_uni_course2
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_pre_uni_grade2 math_edu_pre_uni_course3 math_edu_pre_uni_grade3
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_pre_uni_course4 math_edu_pre_uni_grade4 math_edu_pre_uni_mths1
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_pre_uni_mths2 math_edu_pre_uni_mths3 math_edu_pre_uni_mths4
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character
```

```
math_edu_grade_gcse  math_edu_grade_as_level  math_edu_grade_a_level
Length:12570         Length:12570             Length:12570
Class :character      Class :character         Class :character
Mode  :character      Mode  :character         Mode  :character




math_edu_mths_gcse  math_edu_mths_as_level  math_edu_mths_a_level
Length:12570         Length:12570            Length:12570
Class :character      Class :character        Class :character
Mode  :character      Mode  :character        Mode  :character




math_edu_grade_jnr_cert  math_edu_grade_leaving_cert_app
Length:12570             Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




math_edu_grade_leaving_cert  math_edu_mths_jnr_cert
Length:12570                 Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_mths_leaving_cert_app  math_edu_mths_leaving_cert
Length:12570                     Length:12570
Class :character                  Class :character
Mode  :character                  Mode  :character
```

```
math_edu_grade_standard math_edu_grade_higher math_edu_grade_adv_higher
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_mths_standard math_edu_mths_higher math_edu_mths_adv_higher
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_grade_act math_edu_grade_sat math_edu_type_act   math_edu_type_sat
Length:12570       Length:12570       Length:12570         Length:12570
Class :character   Class :character   Class :character     Class :character
Mode  :character   Mode  :character   Mode  :character     Mode  :character




math_edu_type_none math_edu_type_specify math_edu_mths_act   math_edu_mths_sat
Length:12570       Length:12570          Length:12570         Length:12570
Class :character   Class :character      Class :character     Class :character
Mode  :character   Mode  :character      Mode  :character     Mode  :character




math_edu_grade_vwo_wiskunde_a math_edu_grade_vwo_wiskunde_b
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_grade_vwo_wiskunde_c math_edu_grade_wiskundetoets
Length:12570                  Length:12570
Class :character              Class :character
```

```
Mode   :character          Mode   :character




math_edu_grade_abitur_matura math_edu_mths_vwo_wiskunde_a
Length:12570               Length:12570
Class :character           Class :character
Mode   :character          Mode   :character




math_edu_mths_vwo_wiskunde_b math_edu_mths_vwo_wiskunde_c
Length:12570               Length:12570
Class :character           Class :character
Mode   :character          Mode   :character




math_edu_mths_wiskundetoets math_edu_mths_abitur_matura
Length:12570               Length:12570
Class :character           Class :character
Mode   :character          Mode   :character




maths_edu_grade_10th_std_scc maths_edu_grade_12th_std_hsc
Length:12570               Length:12570
Class :character           Class :character
Mode   :character          Mode   :character




maths_edu_mths_10th_std_scc maths_edu_mths_12th_std_hsc
Length:12570               Length:12570
Class :character           Class :character
Mode   :character          Mode   :character
```

```
math_edu_grade_olevel_spm  math_edu_mths_o_level_spm  math_edu_mths_uec_stpm_etc
Length:12570               Length:12570               Length:12570
Class :character           Class :character           Class :character
Mode  :character           Mode  :character           Mode  :character




math_edu_grade_high_school math_edu_grade_senior_high
Length:12570               Length:12570
Class :character           Class :character
Mode  :character           Mode  :character




math_edu_mths_high_school  math_edu_mths_senior_high  math_edu_grade_mittlere
Length:12570               Length:12570               Length:12570
Class :character           Class :character           Class :character
Mode  :character           Mode  :character           Mode  :character




math_edu_grade_matura_abitur math_edu_mths_mittlere
Length:12570                 Length:12570
Class :character             Class :character
Mode  :character             Mode  :character




math_edu_mths_matura_abitur math_edu_uni_entrance_option
Length:12570                Length:12570
Class :character            Class :character
Mode  :character            Mode  :character




math_edu_bacc_modality math_edu_yrs        math_edu_grade_hochschulreife
```

```
    Length:12570            Length:12570           Length:12570
    Class :character        Class :character       Class :character
    Mode  :character        Mode  :character       Mode  :character




 math_edu_mths_hochschulreife math_edu_grade_brevet_colleges
    Length:12570                 Length:12570
    Class :character             Class :character
    Mode  :character             Mode  :character




 math_edu_grade_baccalaureate math_edu_mths_brevet_colleges
    Length:12570                 Length:12570
    Class :character             Class :character
    Mode  :character             Mode  :character




 math_edu_mths_baccalaureate math_edu_grade_cess math_edu_mths_cess
    Length:12570                Length:12570        Length:12570
    Class :character            Class :character    Class :character
    Mode  :character            Mode  :character    Mode  :character




 math_edu_take_enem math_edu_grade_enem math_edu_year_emen math_edu_no_years
    Length:12570       Length:12570        Length:12570       Length:12570
    Class :character   Class :character    Class :character   Class :character
    Mode  :character   Mode  :character    Mode  :character   Mode  :character




 math_edu_grade_liseye math_edu_grade_universiteye math_edu_mths_liseye
    Length:12570          Length:12570                Length:12570
    Class :character      Class :character            Class :character
    Mode  :character      Mode  :character            Mode  :character
```

```
math_edu_mths_universiteye  math_edu_grade_lai  math_edu_grade_kitsas
Length:12570                Length:12570        Length:12570
Class :character            Class :character    Class :character
Mode  :character            Mode  :character    Mode  :character




math_edu_grade_uldine  math_edu_mths_lai   math_edu_mths_kitsas
Length:12570           Length:12570        Length:12570
Class :character       Class :character    Class :character
Mode  :character       Mode  :character    Mode  :character




math_edu_mths_uldine  math_edu_grade_total  math_edu_grade_erettsegi
Length:12570          Length:12570          Length:12570
Class :character      Class :character      Class :character
Mode  :character      Mode  :character      Mode  :character




math_edu_grade_emelt_szintu  math_edu_mths_erettsegi  math_edu_mths_emelt_szintu
Length:12570                 Length:12570             Length:12570
Class :character             Class :character         Class :character
Mode  :character             Mode  :character         Mode  :character




math_edu_grade_zdravstvena  math_edu_mths_zdravstvena  math_edu_mths_gimnazija
Length:12570                Length:12570               Length:12570
Class :character            Class :character           Class :character
Mode  :character            Mode  :character           Mode  :character
```

```
math_edu_grade_srednjoj_skoli math_edu_grade_fakultativni
Length:12570                   Length:12570
Class :character               Class :character
Mode  :character               Mode  :character




math_edu_grade_obavezni math_edu_mths_srednjoj_skoli
Length:12570            Length:12570
Class :character        Class :character
Mode  :character        Mode  :character




math_edu_mths_fakultativni math_edu_mths_obavezni math_edu_grade_podstawowy
Length:12570               Length:12570          Length:12570
Class :character           Class :character      Class :character
Mode  :character           Mode  :character      Mode  :character




math_edu_grade_rozszerzony math_edu_mths_podstawowy math_edu_mths_rozszerzony
Length:12570               Length:12570            Length:12570
Class :character           Class :character        Class :character
Mode  :character           Mode  :character        Mode  :character




math_edu_grade_capacitate math_edu_grade_bacalaureat math_edu_mths_capacitate
Length:12570              Length:12570               Length:12570
Class :character          Class :character           Class :character
Mode  :character          Mode  :character           Mode  :character




math_edu_mths_bacalaureat math_edu_grade_maturita
Length:12570              Length:12570
```

```
Class :character          Class :character
Mode  :character          Mode  :character




math_edu_grade_strednej_skole math_edu_mths_maturita
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_mths_strednej_skole math_edu_grade_lower math_edu_grade_general
Length:12570                  Length:12570          Length:12570
Class :character              Class :character      Class :character
Mode  :character              Mode  :character      Mode  :character




math_edu_mths_lower math_edu_mths_general math_edu_units_matriculation
Length:12570        Length:12570          Length:12570
Class :character    Class :character      Class :character
Mode  :character    Mode  :character      Mode  :character




math_edu_grade_matriculation math_edu_yrsmths_matriculation
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_psychometric math_edu_grade_psychometric
Length:12570          Length:12570
Class :character      Class :character
Mode  :character      Mode  :character
```

```
math_edu_yrsmths_psychometric math_edu_grade_secondary
Length:12570                 Length:12570
Class :character             Class :character
Mode  :character             Mode  :character




math_edu_grade_undergrad math_edu_mths_secondary math_edu_mths_undergrad
Length:12570             Length:12570            Length:12570
Class :character         Class :character        Class :character
Mode  :character         Mode  :character        Mode  :character




math_edu_grade_gymnasio math_edu_grade_lykeion math_edu_mths_gymnasio
Length:12570            Length:12570           Length:12570
Class :character        Class :character       Class :character
Mode  :character        Mode  :character       Mode  :character




math_edu_mths_lykeion math_edu_grade_sta math_edu_grade_external
Length:12570          Length:12570       Length:12570
Class :character      Class :character   Class :character
Mode  :character      Mode  :character   Mode  :character




math_edu_mths_sta  math_edu_mths_external stats_edu_first_module
Length:12570       Length:12570           Length:12570
Class :character   Class :character       Class :character
Mode  :character   Mode  :character       Mode  :character
```

```
stats_edu_module_1 stats_edu_module_2 stats_edu_module_3 stats_edu_module_4
Length:12570       Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character   Class :character
Mode  :character   Mode  :character   Mode  :character   Mode  :character




stats_edu_module_5 stats_edu_module_6 stats_edu_module_specify
Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character
Mode  :character   Mode  :character   Mode  :character




stats_edu_grade    stats_edu_grade_1  stats_edu_grade_2  stats_edu_grade_3
Length:12570       Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character   Class :character
Mode  :character   Mode  :character   Mode  :character   Mode  :character




stats_edu_grade_4  stats_edu_grade_5  stats_edu_grade_6
Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character
Mode  :character   Mode  :character   Mode  :character




stats_edu_grade_baskent_1 stats_edu_grade_baskent_2 stats_edu_grade_edited
Length:12570              Length:12570              Length:12570
Class :character         Class :character         Class :character
Mode  :character         Mode  :character         Mode  :character




stats_edu_grade_1_edited stats_edu_grade_2_edited stats_edu_grade_3_edited
Length:12570             Length:12570             Length:12570
Class :character         Class :character         Class :character
```

```
Mode   :character        Mode   :character        Mode   :character




stats_edu_grade_4_edited stats_edu_grade_5_edited stats_edu_grade_6_edited
Length:12570             Length:12570             Length:12570
Class :character         Class :character         Class :character
Mode   :character        Mode   :character        Mode   :character




stats_edu_grade_data_type all_stats_modules   is_university
Length:12570              Length:12570        Length:12570
Class :character          Class :character    Class :character
Mode   :character         Mode   :character   Mode   :character




is_stats_module     average_overall_grade is_stats_module_code
Length:12570        Length:12570          Length:12570
Class :character    Class :character      Class :character
Mode   :character   Mode   :character     Mode   :character




mod_start_date      mod_end_date        software_excel      software_jamovi
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode   :character   Mode   :character   Mode   :character   Mode   :character




software_jasp       software_r          software_sas        software_spss_amos
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode   :character   Mode   :character   Mode   :character   Mode   :character
```

```
software_spss_stats software_none      software_other      software_specify
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character    Mode  :character




freq_or_bayes       topic_covariates    topic_algebra       topic_anova
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character    Mode  :character




topic_bayes_factors topic_bayes_theorem topic_bootstrapping topic_calculus
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character    Mode  :character




topic_casual_inference topic_causality    topic_conf_ints
Length:12570           Length:12570        Length:12570
Class :character       Class :character    Class :character
Mode  :character       Mode  :character    Mode  :character




topic_correlation   topic_data_wrangling topic_data_vis      topic_distributions
Length:12570        Length:12570         Length:12570        Length:12570
Class :character    Class :character     Class :character    Class :character
Mode  :character    Mode  :character     Mode  :character    Mode  :character




topic_descriptive_stats topic_effect_sizes topic_exp_design
```

```
Length:12570          Length:12570       Length:12570
Class :character      Class :character   Class :character
Mode  :character      Mode  :character   Mode  :character




topic_factor_analysis topic_moderation   topic_linear_models
Length:12570          Length:12570       Length:12570
Class :character      Class :character   Class :character
Mode  :character      Mode  :character   Mode  :character




topic_logistic_reg topic_mediation   topic_meta_analysis topic_assumptions
Length:12570       Length:12570      Mode:logical        Length:12570
Class :character   Class :character  NA's:12570          Class :character
Mode  :character   Mode  :character                      Mode  :character




topic_multi_comparisons topic_multi_regression topic_non_para
Length:12570            Length:12570           Length:12570
Class :character        Class :character       Class :character
Mode  :character        Mode  :character       Mode  :character




 topic_nhst          topic_ols         topic_open_science topic_philosophy
Length:12570        Length:12570       Length:12570       Length:12570
Class :character    Class :character   Class :character   Class :character
Mode  :character    Mode  :character   Mode  :character   Mode  :character




topic_probability   topic_psychometrics  topic_qual         topic_reliability
Length:12570        Length:12570         Length:12570       Length:12570
Class :character    Class :character     Class :character   Class :character
Mode  :character    Mode  :character     Mode  :character   Mode  :character
```

```
topic_regression        topic_rep_crisis        topic_report_writing  topic_robust_tests
Length:12570            Length:12570            Length:12570          Length:12570
Class :character        Class :character        Class :character      Class :character
Mode  :character        Mode  :character        Mode  :character      Mode  :character



topic_power             topic_software          topic_ttest           topic_other_a
Length:12570            Length:12570            Length:12570          Length:12570
Class :character        Class :character        Class :character      Class :character
Mode  :character        Mode  :character        Mode  :character      Mode  :character



topic_other_b           topic_other_c           topic_other_d         topic_specify_a
Length:12570            Length:12570            Length:12570          Length:12570
Class :character        Class :character        Class :character      Class :character
Mode  :character        Mode  :character        Mode  :character      Mode  :character



topic_specify_b         topic_specify_c         topic_specify_d       instructor_type
Length:12570            Length:12570            Length:12570          Length:12570
Class :character        Class :character        Class :character      Class :character
Mode  :character        Mode  :character        Mode  :character      Mode  :character



instructor_type_main_specify  instructor_type_other_specify  in_person_percent
Length:12570                  Length:12570                   Min.   :  0.00
Class :character              Class :character               1st Qu.: 10.00
Mode  :character              Mode  :character               Median : 40.00
                                                             Mean   : 43.71
                                                             3rd Qu.: 75.00
                                                             Max.   :100.00
```

```
                                                        NA's   :9163
in_person_reduction teaching_mode_lectures teaching_mode_practicals
Length:12570        Length:12570            Length:12570
Class :character    Class :character        Class :character
Mode  :character    Mode  :character        Mode  :character




teaching_mode_seminars teaching_mode_other_a teaching_mode_other_b
Length:12570           Length:12570          Length:12570
Class :character       Class :character      Class :character
Mode  :character       Mode  :character      Mode  :character




teaching_mode_specify_a teaching_mode_specify_b hrs_pw_lectures
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




hrs_pw_practicals  hrs_pw_seminars   hrs_pw_other_a     hrs_pw_other_b
Length:12570       Length:12570      Length:12570       Min.   :0.750
Class :character   Class :character  Class :character   1st Qu.:1.000
Mode  :character   Mode  :character  Mode  :character   Median :1.000
                                                        Mean   :0.967
                                                        3rd Qu.:1.000
                                                        Max.   :1.000
                                                        NA's   :12509
in_person_lectures in_person_lectures_specify sync_lectures
Length:12570       Length:12570               Length:12570
Class :character   Class :character           Class :character
Mode  :character   Mode  :character           Mode  :character




sync_lectures_specify in_person_practicals in_person_practicals_specify
Length:12570          Length:12570         Length:12570
```

```
Class :character        Class :character      Class :character
Mode  :character        Mode  :character      Mode  :character




in_person_seminars  in_person_seminars_specify  in_person_other_a
Length:12570        Mode:logical                Length:12570
Class :character    NA's:12570                  Class :character
Mode  :character                                Mode  :character




in_person_other_a_specify  in_person_other_b  in_person_other_b_specify
Length:12570               Length:12570       Length:12570
Class :character           Class :character   Class :character
Mode  :character           Mode  :character   Mode  :character




assess_type_final_exam  assess_type_take_away_paper  assess_type_coursework
Length:12570            Length:12570                 Length:12570
Class :character        Class :character             Class :character
Mode  :character        Mode  :character             Mode  :character




assess_type_regular_testing  assess_type_attendance  assess_type_other_a
Length:12570                 Length:12570            Length:12570
Class :character             Class :character        Class :character
Mode  :character             Mode  :character        Mode  :character




assess_type_other_b  assess_type_other_c  assess_type_other_a_specify
Length:12570         Length:12570         Length:12570
Class :character     Class :character     Class :character
Mode  :character     Mode  :character     Mode  :character
```

```
assess_type_other_b_specify assess_type_other_c_specify
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




assess_percent_final_exam assess_percent_take_away_paper
Min.   : 25.00            Min.   :  0.00
1st Qu.: 30.00            1st Qu.: 16.00
Median : 50.00            Median : 40.00
Mean   : 55.93           Mean   : 33.05
3rd Qu.: 75.00            3rd Qu.: 40.00
Max.   :100.00           Max.   :100.00
NA's   :9540             NA's   :11976
assess_percent_coursework assess_percent_regular_testing
Min.   :  0.00           Min.   :  0.00
1st Qu.: 30.00           1st Qu.:20.00
Median : 40.00           Median :35.00
Mean   : 45.11          Mean   :34.62
3rd Qu.: 50.00           3rd Qu.:50.00
Max.   :100.00          Max.   :70.00
NA's   :9322            NA's   :9584
assess_percent_attendance assess_percent_other_a assess_percent_other_b
Min.   : 0.000           Min.   : 0.00          Min.   : 2.500
1st Qu.: 0.000           1st Qu.: 5.00          1st Qu.: 2.500
Median : 0.000           Median :10.00          Median : 5.000
Mean   : 2.853          Mean   :20.94          Mean   : 8.114
3rd Qu.: 5.000           3rd Qu.:25.00          3rd Qu.:10.000
Max.   :25.000          Max.   :70.00          Max.   :30.000
NA's   :11932           NA's   :11331          NA's   :12289
assess_percent_other_c  no_of_exams    length_exam_single date_exam_single
Min.   : 0.00           Min.   :  1.0   Min.   :  6.00     Length:12570
1st Qu.:20.00           1st Qu.:  1.0   1st Qu.: 75.00     Class :character
Median :27.50           Median :  1.0   Median :100.00     Mode  :character
Mean   :23.34          Mean   : 14.2   Mean   : 95.18
3rd Qu.:27.50           3rd Qu.:  1.0   3rd Qu.:120.00
Max.   :27.50          Max.   :400.0   Max.   :180.00
NA's   :12404           NA's   :9610    NA's   :10226
```

```
 in_person_exam_single  in_person_exam_single_specify  scale_exam_single
 Length:12570           Mode:logical                   Length:12570
 Class :character        NA's:12570                     Class :character
 Mode  :character                                       Mode  :character




 scale_exam_single_yes_specify  scale_exam_single_no_specify  length_exam_multi1
 Length:12570                   Length:12570                   Min.   : 45.0
 Class :character               Class :character               1st Qu.: 90.0
 Mode  :character               Mode  :character               Median : 90.0
                                                               Mean   :102.4
                                                               3rd Qu.:120.0
                                                               Max.   :150.0
                                                               NA's   :12064
 length_exam_multi2  length_exam_multi3  length_exam_multi4  date_exam_multi1
 Min.   : 15.00      Min.   : 90.00      Min.   : 90.00      Length:12570
 1st Qu.: 30.00      1st Qu.: 90.00      1st Qu.: 90.00      Class :character
 Median : 90.00      Median : 90.00      Median : 90.00      Mode  :character
 Mean   : 75.68      Mean   : 99.94      Mean   : 99.94
 3rd Qu.:100.00      3rd Qu.:120.00      3rd Qu.:120.00
 Max.   :120.00      Max.   :120.00      Max.   :120.00
 NA's   :12160       NA's   :12398       NA's   :12398
 date_exam_multi2    date_exam_multi3    date_exam_multi4    in_person_exam_multi1
 Length:12570        Length:12570        Length:12570        Length:12570
 Class :character    Class :character    Class :character    Class :character
 Mode  :character    Mode  :character    Mode  :character    Mode  :character




 in_person_exam_multi2  in_person_exam_multi3  in_person_exam_multi4
 Length:12570           Length:12570           Length:12570
 Class :character       Class :character       Class :character
 Mode  :character       Mode  :character       Mode  :character




 scale_exam_multi1  scale_exam_multi1_yes_specify  scale_exam_multi1_no_specify
 Length:12570       Length:12570                   Length:12570
 Class :character   Class :character               Class :character
```

```
Mode  :character   Mode  :character            Mode  :character




scale_exam_multi2  scale_exam_multi2_yes_specify scale_exam_multi2_no_specify
Length:12570       Length:12570                 Length:12570
Class :character   Class :character             Class :character
Mode  :character   Mode  :character             Mode  :character




scale_exam_multi3  scale_exam_multi3_yes_specify scale_exam_multi3_no_specify
Length:12570       Length:12570                 Length:12570
Class :character   Class :character             Class :character
Mode  :character   Mode  :character             Mode  :character




scale_exam_multi4  scale_exam_multi4_yes_specify scale_exam_multi4_no_specify
Length:12570       Length:12570                 Length:12570
Class :character   Class :character             Class :character
Mode  :character   Mode  :character             Mode  :character




no_types_reg_tests freq_reg_tests_single freq_reg_tests_single_specify
Min.   : 1.000     Length:12570          Length:12570
1st Qu.: 1.000     Class :character      Class :character
Median : 2.000     Mode  :character      Mode  :character
Mean   : 2.872
3rd Qu.: 3.000
Max.   :17.000
NA's   :9654
format_reg_tests_single format_reg_tests_single_cwk_specify
Length:12570            Length:12570
Class :character        Class :character
Mode  :character        Mode  :character
```

```
timed_reg_tests_single  time_reg_tests_single  all_marks_reg_tests_single
Length:12570            Length:12570           Length:12570
Class :character        Class :character       Class :character
Mode  :character        Mode  :character       Mode  :character




all_marks_reg_tests_single_no_specify all_marks_reg_tests_single_other_specify
Length:12570                          Mode:logical
Class :character                      NA's:12570
Mode  :character




scale_reg_tests_single  scale_reg_tests_single_yes_specify
Length:12570            Length:12570
Class :character        Class :character
Mode  :character        Mode  :character




scale_reg_tests_single_no_specify format_reg_tests_multi1
Length:12570                      Length:12570
Class :character                  Class :character
Mode  :character                  Mode  :character




format_reg_tests_multi1_cwk_specify freq_reg_tests_multi1
Length:12570                        Length:12570
Class :character                    Class :character
Mode  :character                    Mode  :character




freq_reg_tests_multi1_specify timed_reg_tests_multi1 time_reg_tests_multi1
```

```
Length:12570              Length:12570              Length:12570
Class :character          Class :character          Class :character
Mode  :character          Mode  :character          Mode  :character




all_marks_reg_tests_multi1 all_marks_reg_tests_multi1_no_specify
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_reg_tests_multi2 format_reg_tests_multi2_cwk_specify
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




freq_reg_tests_multi2 freq_reg_tests_multi2_specify timed_reg_tests_multi2
Length:12570              Length:12570              Length:12570
Class :character          Class :character          Class :character
Mode  :character          Mode  :character          Mode  :character




time_reg_tests_multi2 all_marks_reg_tests_multi2
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




all_marks_reg_tests_multi2_no_specify all_marks_reg_tests_multi2_other_specify
Length:12570                          Length:12570
Class :character                      Class :character
Mode  :character                      Mode  :character
```

```
    no_of_taps        time_taps_single      start_date_tap_single  end_date_tap_single
Min.   :1.000    Length:12570         Length:12570          Length:12570
1st Qu.:1.000    Class :character     Class :character      Class :character
Median :1.000    Mode  :character     Mode  :character      Mode  :character
Mean   :1.483
3rd Qu.:1.000
Max.   :4.000
NA's   :12046
scale_tap_single    scale_tap_single_yes_specify  scale_tap_single_no_specify
Length:12570        Length:12570                  Length:12570
Class :character    Class :character              Class :character
Mode  :character    Mode  :character              Mode  :character




time_taps_multi1    time_taps_multi2    time_taps_multi3    time_taps_multi4
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character    Mode  :character




start_date_tap_multi1 start_date_tap_multi2 start_date_tap_multi3
Length:12570          Length:12570          Length:12570
Class :character      Class :character      Class :character
Mode  :character      Mode  :character      Mode  :character




start_date_tap_multi4 end_date_tap_multi1 end_date_tap_multi2
Length:12570          Length:12570        Length:12570
Class :character      Class :character    Class :character
Mode  :character      Mode  :character    Mode  :character
```

```
end_date_tap_multi3 end_date_tap_multi4 scale_tap_multi1
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




scale_tap_multi1_yes_specify scale_tap_multi2   scale_tap_multi2_yes_specify
Length:12570                 Length:12570        Length:12570
Class :character             Class :character   Class :character
Mode  :character             Mode  :character   Mode  :character




scale_tap_multi3    scale_tap_multi3_yes_specify scale_tap_multi4
Length:12570        Length:12570                 Length:12570
Class :character    Class :character             Class :character
Mode  :character    Mode  :character             Mode  :character




scale_tap_multi4_yes_specify    no_of_cwk      format_cwk_single
Length:12570                 Min.   : 1.000   Length:12570
Class :character             1st Qu.: 1.000   Class :character
Mode  :character             Median : 2.000   Mode  :character
                             Mean   : 3.791
                             3rd Qu.: 3.000
                             Max.   :39.000
                             NA's   :9400
format_cwk_single_report_specify format_cwk_single_other_specify
Length:12570                     Length:12570
Class :character                 Class :character
Mode  :character                 Mode  :character




deadline_cwk_single scale_cwk_single   scale_cwk_single_yes_specify
Length:12570        Length:12570        Length:12570
```

```
Class :character     Class :character     Class :character
Mode  :character     Mode  :character     Mode  :character




scale_cwk_single_no_specify format_cwk_multi1_full_report
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi2_full_report format_cwk_multi3_full_report
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi4_full_report format_cwk_multi5_full_report
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi6_full_report format_cwk_multi7_full_report
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi8_full_report format_cwk_multi9_full_report
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character
```

```
format_cwk_multi1_partial_report  format_cwk_multi2_partial_report
Length:12570                      Length:12570
Class :character                  Class :character
Mode  :character                  Mode  :character




format_cwk_multi3_partial_report  format_cwk_multi4_partial_report
Length:12570                      Length:12570
Class :character                  Class :character
Mode  :character                  Mode  :character




format_cwk_multi5_partial_report  format_cwk_multi10_partial_report
Length:12570                      Length:12570
Class :character                  Class :character
Mode  :character                  Mode  :character




format_cwk_multi1_proposal  format_cwk_multi2_proposal
Length:12570                Length:12570
Class :character            Class :character
Mode  :character            Mode  :character




format_cwk_multi8_proposal  format_cwk_multi1_other1  format_cwk_multi2_other1
Mode:logical                Length:12570              Length:12570
NA's:12570                  Class :character          Class :character
                            Mode  :character          Mode  :character
```

```
format_cwk_multi3_other1   format_cwk_multi4_other1   format_cwk_multi5_other1
Length:12570               Length:12570               Length:12570
Class :character           Class :character           Class :character
Mode  :character           Mode  :character           Mode  :character




format_cwk_multi_other1_specify   format_cwk_multi1_other2
Length:12570                      Length:12570
Class :character                  Class :character
Mode  :character                  Mode  :character




format_cwk_multi2_other2   format_cwk_multi3_other2
Length:12570               Length:12570
Class :character           Class :character
Mode  :character           Mode  :character




format_cwk_multi_other2_specify   format_cwk_multi6_other3
Length:12570                      Mode:logical
Class :character                  NA's:12570
Mode  :character




format_cwk_multi_other3_specify   format_cwk_multi7_other4
Mode:logical                      Mode:logical
NA's:12570                        NA's:12570




format_cwk_multi_other4_specify   format_cwk_multi9_other5
Mode:logical                      Mode:logical
NA's:12570                        NA's:12570
```

```
format_cwk_multi_other5_specify format_cwk_multi10_other6
Mode:logical                    Mode:logical
NA's:12570                      NA's:12570




format_cwk_multi_other6_specify deadline_cwk_multi1 deadline_cwk_multi2
Mode:logical                    Length:12570        Length:12570
NA's:12570                      Class :character    Class :character
                                Mode  :character    Mode  :character




deadline_cwk_multi3 deadline_cwk_multi4 deadline_cwk_multi5
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




deadline_cwk_multi6 deadline_cwk_multi7 deadline_cwk_multi8
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




deadline_cwk_multi9 deadline_cwk_multi10 scale_cwk_multi1
Length:12570        Length:12570         Length:12570
Class :character    Class :character     Class :character
Mode  :character    Mode  :character     Mode  :character
```

```
scale_cwk_multi1_yes_specify  scale_cwk_multi1_no_specify  scale_cwk_multi2
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi2_yes_specify  scale_cwk_multi2_no_specify  scale_cwk_multi3
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi3_yes_specify  scale_cwk_multi3_no_specify  scale_cwk_multi4
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi4_yes_specify  scale_cwk_multi4_no_specify  scale_cwk_multi5
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi5_yes_specify  scale_cwk_multi5_no_specify  scale_cwk_multi6
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi6_yes_specify scale_cwk_multi6_no_specify scale_cwk_multi7
```

```
Length:12570              Length:12570              Length:12570
Class :character          Class :character          Class :character
Mode  :character          Mode  :character          Mode  :character




 scale_cwk_multi7_yes_specify scale_cwk_multi7_no_specify scale_cwk_multi8
Length:12570              Length:12570              Length:12570
Class :character          Class :character          Class :character
Mode  :character          Mode  :character          Mode  :character




 scale_cwk_multi8_yes_specify scale_cwk_multi8_no_specify scale_cwk_multi9
Length:12570              Length:12570              Length:12570
Class :character          Class :character          Class :character
Mode  :character          Mode  :character          Mode  :character




 scale_cwk_multi9_yes_specify scale_cwk_multi9_no_specify scale_cwk_multi10
Length:12570              Length:12570              Length:12570
Class :character          Class :character          Class :character
Mode  :character          Mode  :character          Mode  :character




 scale_cwk_multi10_no_specify tasks_other1       date_other1
Length:12570              Length:12570          Length:12570
Class :character          Class :character      Class :character
Mode  :character          Mode  :character      Mode  :character




 scale_other1          scale_other1_yes_specify scale_other1_no_specify
Length:12570          Length:12570          Length:12570
Class :character      Class :character      Class :character
Mode  :character      Mode  :character      Mode  :character
```

```
info_other1           tasks_other2          date_other2           scale_other2
Length:12570          Length:12570          Length:12570          Length:12570
Class :character      Class :character      Class :character      Class :character
Mode  :character      Mode  :character      Mode  :character      Mode  :character




scale_other2_yes_specify scale_other2_no_specify info_other2
Length:12570             Mode:logical            Length:12570
Class :character         NA's:12570              Class :character
Mode  :character                                 Mode  :character




tasks_other3          date_other3           scale_other3
Length:12570          Length:12570          Length:12570
Class :character      Class :character      Class :character
Mode  :character      Mode  :character      Mode  :character




scale_other3_yes_specify scale_other3_no_specify summative_instructor_written
Length:12570             Length:12570            Length:12570
Class :character         Class :character        Class :character
Mode  :character         Mode  :character        Mode  :character




summative_instructor_verbal summative_instructor_grade summative_peer_written
Length:12570                Length:12570               Mode:logical
Class :character            Class :character           NA's:12570
Mode  :character            Mode  :character
```

```
summative_peer_verbal summative_peer_grade summative_none
Length:12570           Length:12570         Length:12570
Class :character       Class :character     Class :character
Mode  :character       Mode  :character     Mode  :character




additional_info     grade_module_name      grade              grade_low
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character    Mode  :character




 grade_high         grade_category_notes
Length:12570        Length:12570
Class :character    Class :character
Mode  :character    Mode  :character
```

```r
# tidyverse alternative
glimpse(df)
```

```
Rows: 12,570
Columns: 788
$ unique_id                <chr> "01057178", "0300b5f2", "03f6~
$ survey_id                <chr> "airlangga", "airlangga", "ai~
$ country                  <chr> "Indonesia", "Indonesia", "In~
$ language                 <chr> "Bahasa Indonesia", "Bahasa I~
$ incentive                <chr> "Prize Draw", "Prize Draw", "~
$ participation_context    <chr> "Remotely, in own time", "Rem~
$ progress                 <dbl> 100, 100, 100, 78, 100, 100, ~
$ duration                 <dbl> 5829, 2084, 5667, 2155, 3342,~
$ start_date               <chr> "7/4/2021", "1/4/2021", "7/4/~
$ end_date                 <chr> "7/4/2021", "1/4/2021", "8/4/~
$ university               <chr> "Airlangga University", "Airl~
```

```
$ eligibility_ug              <chr> "Yes", "Yes", "Yes", "Yes", "~
$ eligibility_stats           <chr> "Yes", "Yes", "Yes", "Yes", "~
$ degree_major                <chr> "Psychology", "Psychology", "~
$ degree_minor                <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ degree_level_maths          <chr> "No", "No", "Yes (please spec~
$ degree_level_maths_specify  <chr> NA, NA, "Statistics", NA, NA,~
$ degree_year                 <chr> "3rd Year", "4th Year", "4th ~
$ age                         <chr> "18-21", "18-21", "22-25", NA~
$ gender                      <chr> "Male/Man", "Female/Woman", "~
$ spld                        <chr> "I do not have an SpLD", "I d~
$ attention_amnesty           <chr> "Yes", "Yes", "Yes", NA, "Yes~
$ Q7.1_1                      <dbl> 3, 3, 4, 4, 5, 1, 1, 3, 4, 4,~
$ Q7.1_2                      <dbl> 5, 4, 4, 4, 4, 1, 2, 1, 4, 3,~
$ Q7.1_3                      <dbl> 3, 1, 3, 4, 5, 2, 2, 1, 5, 2,~
$ Q7.1_4                      <dbl> 4, 5, 4, 5, 5, 2, 3, 3, 3, 3,~
$ Q7.1_5                      <dbl> 4, 5, 4, 4, 4, 1, 1, 2, 4, 2,~
$ Q7.1_6                      <dbl> 4, 4, 3, 2, 4, 1, 1, 2, 1, 3,~
$ Q7.1_7                      <dbl> 5, 4, 4, 4, 5, 3, 1, 5, 5, 4,~
$ Q7.1_8                      <dbl> 5, 2, 5, 5, 5, 3, 4, 4, 3, 4,~
$ Q7.1_9                      <dbl> 2, 1, 1, 1, 1, 1, 1, 1, 1, 4,~
$ Q7.1_10                     <dbl> 4, 3, 4, 4, 5, 2, 1, 2, 2, 4,~
$ Q7.1_11                     <dbl> 4, 4, 4, 4, 4, 1, 1, 1, 5, 4,~
$ Q7.1_12                     <dbl> 2, 1, 1, 2, 4, 1, 4, 1, 4, 3,~
$ Q7.1_13                     <dbl> 4, 2, 5, 3, 5, 2, 1, 2, 4, 4,~
$ Q7.1_14                     <dbl> 4, 5, 4, 2, 5, 2, 1, 4, 2, 5,~
$ Q7.1_15                     <dbl> 3, 3, 3, 4, 5, 2, 2, 1, 3, 2,~
$ Q7.1_16                     <dbl> 2, 4, 2, 4, 5, 1, 2, 2, 5, 3,~
$ Q7.1_17                     <dbl> 2, 2, 2, 2, 4, 1, 1, 1, 3, 5,~
$ Q7.1_18                     <dbl> 4, 1, 5, 2, 5, 1, 1, 3, 4, 2,~
$ Q7.1_19                     <dbl> 4, 3, 2, 2, 5, 1, 1, 1, 4, 1,~
$ Q7.1_20                     <dbl> 5, 4, 4, 4, 4, 1, 1, 3, 4, 2,~
$ Q7.1_21                     <dbl> 2, 3, 3, 4, 4, 1, 1, 4, 1, 3,~
$ Q7.1_22                     <dbl> 5, 4, 4, 5, 4, 1, 1, 2, 4, 3,~
$ Q7.1_23                     <dbl> 4, 4, 2, 1, 5, 1, 1, 2, 4, 1,~
$ Q7.1_24                     <dbl> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,~
$ Q7.2_1                      <dbl> 3, 4, 3, 4, 5, 1, 1, 2, 1, 5,~
$ Q7.2_2                      <dbl> 4, 5, 5, 4, 4, 3, 4, 3, 4, 4,~
$ Q7.2_3                      <dbl> 4, 4, 4, 4, 4, 3, 4, 4, 3, 5,~
$ Q7.2_4                      <dbl> 4, 4, 5, 5, 5, 3, 4, 4, 4, 5,~
$ Q7.2_5                      <dbl> 4, 3, 5, 5, 5, 2, 2, 3, 2, 5,~
$ Q7.2_6                      <dbl> 4, 4, 5, 4, 5, 2, 2, 4, 2, 4,~
$ Q7.2_7                      <dbl> 4, 4, 5, 4, 5, 2, 2, 4, 3, 5,~
$ Q7.2_8                      <dbl> 3, 4, 4, 5, 4, 1, 1, 4, 3, 3,~
```

```
$ Q7.2_9      <dbl> 5, 4, 4, 5, 5, 2, 1, 4, 3, 5,~
$ Q7.2_10     <dbl> 5, 5, 5, 5, 5, 4, 5, 4, 5, 4,~
$ Q7.2_11     <dbl> 2, 4, 5, 2, 4, 1, 4, 4, 3, 4,~
$ Q7.2_12     <dbl> 2, 4, 5, 3, 4, 1, 4, 3, 3, 3,~
$ Q7.2_13     <dbl> 2, 3, 5, 4, 1, 1, 4, 4, 4, 4,~
$ Q7.2_14     <dbl> 2, 4, 4, 4, 4, 1, 4, 4, 3, 3,~
$ Q7.2_15     <dbl> 2, 3, 3, 1, 1, 1, 1, 1, 1, 1,~
$ Q7.2_16     <dbl> 4, 4, 3, 2, 4, 1, 1, 2, 3, 3,~
$ Q7.2_17     <dbl> 3, 3, 5, 1, 4, 1, 1, 4, 1, 3,~
$ Q7.2_18     <dbl> 3, 3, 5, 2, 5, 1, 2, 1, 2, 2,~
$ Q7.2_19     <dbl> 2, 2, 3, 1, 4, 1, 1, 2, 1, 1,~
$ Q7.2_20     <dbl> 2, 4, 4, 2, 1, 2, 4, 2, 1, 4,~
$ Q7.2_21     <dbl> 2, 5, 5, 3, 4, 2, 2, 2, 2, 4,~
$ Q7.2_22     <dbl> 2, 4, 5, 2, 2, 2, 4, 1, 1, 3,~
$ Q7.2_23     <dbl> 2, 3, 5, 3, 5, 2, 4, 4, 3, 4,~
$ Q8.1_1      <dbl> 1, 4, 3, 5, 5, 1, 1, 2, 2, 4,~
$ Q8.1_2      <dbl> 2, 3, 5, 5, 4, 1, 4, 1, 4, 1,~
$ Q8.1_3      <dbl> 1, 3, 1, 4, 5, 1, 1, 1, 5, 1,~
$ Q8.1_4      <dbl> 1, 4, 4, 4, 5, 1, 2, 1, 1, 3,~
$ Q8.1_5      <dbl> 2, 4, 3, 4, 4, 1, 1, 2, 4, 2,~
$ Q8.1_6      <dbl> 2, 4, 4, 2, 4, 1, 1, 3, 4, 2,~
$ Q8.1_7      <dbl> 2, 4, 4, 2, 5, 2, 4, 2, 3, 3,~
$ Q8.1_8      <dbl> 2, 4, 4, 5, 5, 3, 2, 3, 4, 5,~
$ Q8.1_9      <dbl> 2, 3, 3, 5, 4, 3, 1, 4, 3, 3,~
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$ stats_edu_module_2          <chr> "Psychological Measurement", ~
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$ is_stats_module             <chr> "Metode Penelitian dan Analis~
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$ mod_end_date                <chr> "23/12/2020", "23/12/2020", "~
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$ topic_data_vis         <chr> "Data visualisation", "Data v~
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$ topic_descriptive_stats<chr> "Descriptive statistics", "De~
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$ all_marks_reg_tests_single              <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ all_marks_reg_tests_single_no_specify    <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ all_marks_reg_tests_single_other_specify <lgl> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_reg_tests_single                   <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_reg_tests_single_yes_specify       <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_reg_tests_single_no_specify        <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ format_reg_tests_multi1                  <chr> "Online exams (under exam con~
$ format_reg_tests_multi1_cwk_specify      <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ freq_reg_tests_multi1                    <chr> "Other (please specify)", "Ot~
$ freq_reg_tests_multi1_specify            <chr> "once", "once", "once", "once~
$ timed_reg_tests_multi1                   <chr> "Yes", "Yes", "Yes", "Yes", "~
$ time_reg_tests_multi1                    <chr> "20-30 minutes", "20-30 minut~
$ all_marks_reg_tests_multi1               <chr> "Yes, all marks from regular ~
$ all_marks_reg_tests_multi1_no_specify    <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ format_reg_tests_multi2                  <chr> "Online exams (under exam con~
$ format_reg_tests_multi2_cwk_specify      <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ freq_reg_tests_multi2                    <chr> "Fortnightly (every 2 weeks)"~
$ freq_reg_tests_multi2_specify            <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ timed_reg_tests_multi2                   <chr> "Yes", "Yes", "Yes", "Yes", "~
$ time_reg_tests_multi2                    <chr> "20-30 minutes", "20-30 minut~
$ all_marks_reg_tests_multi2               <chr> "Yes, all marks from regular ~
$ all_marks_reg_tests_multi2_no_specify    <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ all_marks_reg_tests_multi2_other_specify <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ no_of_taps                               <dbl> NA, NA, NA, NA, NA, NA, NA, N~
$ time_taps_single                         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ start_date_tap_single                    <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ end_date_tap_single                      <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ scale_tap_single_no_specify              <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ time_taps_multi1                         <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ time_taps_multi3                          <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ start_date_tap_multi4                     <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ end_date_tap_multi2                       <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ end_date_tap_multi3                       <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ end_date_tap_multi4                       <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ scale_tap_multi2                          <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_tap_multi2_yes_specify             <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ scale_tap_multi4_yes_specify             <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ no_of_cwk                                 <dbl> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,~
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$ format_cwk_single_report_specify         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ format_cwk_single_other_specify          <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ deadline_cwk_single                       <chr> "20/01/2021", "20/01/2021", "~
$ scale_cwk_single                          <chr> "Yes (please specify the scal~
$ scale_cwk_single_yes_specify             <chr> "0-100", "0-100", "0-100", "0~
$ scale_cwk_single_no_specify              <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ format_cwk_multi7_full_report            <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ format_cwk_multi8_full_report            <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ format_cwk_multi1_proposal               <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ scale_cwk_multi4_no_specify       <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_cwk_multi5                  <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ scale_cwk_multi6_yes_specify        <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_cwk_multi6_no_specify         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_cwk_multi7                    <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ scale_cwk_multi7_no_specify         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_cwk_multi8                    <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ scale_cwk_multi8_no_specify         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_cwk_multi9                    <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ scale_cwk_multi9_no_specify         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_cwk_multi10                   <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_cwk_multi10_no_specify        <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ tasks_other1                        <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ date_other1                         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_other1                        <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_other1_yes_specify            <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_other1_no_specify             <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ info_other1                         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ tasks_other2                        <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ date_other2                         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_other2                        <chr> NA, NA, NA, NA, NA, NA, NA, N~
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$ scale_other2_no_specify             <lgl> NA, NA, NA, NA, NA, NA, NA, N~
$ info_other2                         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ tasks_other3                        <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ date_other3                         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_other3                        <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_other3_yes_specify            <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ scale_other3_no_specify             <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ summative_instructor_written        <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ summative_instructor_verbal         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ summative_instructor_grade          <chr> "Yes - instructor given grade~
$ summative_peer_written              <lgl> NA, NA, NA, NA, NA, NA, NA, N~
$ summative_peer_verbal               <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ summative_peer_grade                <chr> "Yes - peer given grade", "Ye~
$ summative_none                      <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ additional_info                     <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ grade_module_name                   <chr> "Not Available", "Not Availab~
$ grade                               <chr> "Not Available", "Not Availab~
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$ grade_low                          <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ grade_high                         <chr> NA, NA, NA, NA, NA, NA, NA, N~
$ grade_category_notes               <chr> NA, NA, NA, NA, NA, NA, NA, N~
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# Count the number of missing values per column
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                      survey_id
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                        country
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                        progress
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                      university
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               eligibility_stats
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                    degree_minor
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              degree_level_maths
                             26
      degree_level_maths_specify
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                     degree_year
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                           gender
                             2183
                             spld
                             2692
                attention_amnesty
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                          Q7.1_2
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                          Q7.1_3
                              453
                          Q7.1_4
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                          Q7.1_6
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                          Q7.1_7
                              461
                          Q7.1_8
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                          Q7.1_9
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                         Q7.1_10
                              459
                         Q7.1_11
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                         Q7.1_12
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                         Q7.1_13
                              462
                         Q7.1_14
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                         Q7.1_15
                              452
                         Q7.1_16
                              463
                         Q7.1_17
                              457
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Q7.1_18

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Q7.1_19

453

Q7.1_20

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Q7.1_21

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Q7.1_22

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Q7.1_23

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Q7.1_24

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Q7.2_1

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Q7.2_2

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Q7.2_3

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Q7.2_4

457

Q7.2_5

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Q7.2_6

457

Q7.2_7

462

Q7.2_8

466

Q7.2_9

455

Q7.2_10

451

Q7.2_11

463

Q7.2_12

460

Q7.2_13

466

Q7.2_14

459

Q7.2_15

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Q7.2_17
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Q7.2_18
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Q8.1_13
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Q8.1_14

447

Q8.1_15

441

Q8.1_16

452

Q8.1_17

443

Q8.1_18

447

Q8.1_19

439

Q8.1_20

449

Q8.1_21

1282

Q8.2_1

446

Q8.2_2

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Q8.2_3

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Q8.2_4

455

Q8.2_5

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Q8.2_6

457

Q8.2_7

447

Q8.2_8

444

Q8.2_9

453

Q8.2_10

459

Q8.2_11

444

Q8.2_12

446

Q8.2_13

451

Q8.2_14

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Q10.1_11
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Q12.1_20
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Q17.1

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Q17.2

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Q17.3

1599

Q18.1

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    math_edu_grade12_course2
                        542
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math_edu_grade12_course4

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math_edu_grade12_course5

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math_edu_grade12_course6

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math_edu_grade_grade12_course4

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math_edu_grade_grade12_course6

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math_edu_grade_grade12_course7

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math_edu_grade_grade12_course8

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math_edu_mths_grade10a

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math_edu_mths_grade11a

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math_edu_mths_grade12_course1

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math_edu_mths_grade12_course2

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math_edu_mths_grade12_course7
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       math_edu_grade_grade11b
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        math_edu_mths_grade10b
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             math_edu_mths_a_level
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             math_edu_mths_jnr_cert
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math_edu_grade_kitsas

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math_edu_grade_uldine

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math_edu_mths_lai

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stats_edu_grade_2_edited

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                      11210
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                      12570
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                            9540
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                            9322
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                            9584
       assess_percent_attendance
                           11932
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            assess_percent_other_b
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                           10161
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                            12064
           in_person_exam_multi2
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               scale_exam_multi1
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                            12238
               scale_exam_multi2
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                            12367
               scale_exam_multi3
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                            12513
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                                    12570
                   scale_reg_tests_single
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        scale_reg_tests_single_yes_specify
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                          deadline_cwk_multi5
                                          12323
                          deadline_cwk_multi6
                                          12492
                          deadline_cwk_multi7
                                          12509
                          deadline_cwk_multi8
                                          12509
```

```
              deadline_cwk_multi9
                            12509
             deadline_cwk_multi10
                            12509
                   scale_cwk_multi1
                            11156
        scale_cwk_multi1_yes_specify
                            11447
         scale_cwk_multi1_no_specify
                            12279
                   scale_cwk_multi2
                            11156
        scale_cwk_multi2_yes_specify
                            11430
         scale_cwk_multi2_no_specify
                            12296
                   scale_cwk_multi3
                            11983
        scale_cwk_multi3_yes_specify
                            12063
         scale_cwk_multi3_no_specify
                            12490
                   scale_cwk_multi4
                            12247
        scale_cwk_multi4_yes_specify
                            12323
         scale_cwk_multi4_no_specify
                            12494
                   scale_cwk_multi5
                            12250
        scale_cwk_multi5_yes_specify
                            12323
         scale_cwk_multi5_no_specify
                            12497
                   scale_cwk_multi6
                            12427
        scale_cwk_multi6_yes_specify
                            12492
         scale_cwk_multi6_no_specify
                            12505
                   scale_cwk_multi7
                            12444
        scale_cwk_multi7_yes_specify
```

```
                        12509
  scale_cwk_multi7_no_specify
                        12505
            scale_cwk_multi8
                        12444
  scale_cwk_multi8_yes_specify
                        12509
  scale_cwk_multi8_no_specify
                        12505
            scale_cwk_multi9
                        12444
  scale_cwk_multi9_yes_specify
                        12509
  scale_cwk_multi9_no_specify
                        12505
           scale_cwk_multi10
                        12509
 scale_cwk_multi10_no_specify
                        12509
                 tasks_other1
                        11337
                  date_other1
                        11347
                 scale_other1
                        11337
     scale_other1_yes_specify
                        12027
      scale_other1_no_specify
                        11880
                  info_other1
                        12132
                 tasks_other2
                        12295
                  date_other2
                        12303
                 scale_other2
                        12295
     scale_other2_yes_specify
                        12307
      scale_other2_no_specify
                        12570
                  info_other2
                        12535
```

```
                   tasks_other3
                          12404
                    date_other3
                          12404
                   scale_other3
                          12404
       scale_other3_yes_specify
                          12522
        scale_other3_no_specify
                          12452
   summative_instructor_written
                          11613
    summative_instructor_verbal
                          10512
     summative_instructor_grade
                          12003
        summative_peer_written
                          12570
         summative_peer_verbal
                          12411
          summative_peer_grade
                          12230
                summative_none
                          11025
               additional_info
                          11719
             grade_module_name
                            815
                         grade
                           1457
                     grade_low
                           1578
                    grade_high
                           1578
          grade_category_notes
                           9253
```

0.3 Scoring

My dataset contains the individual items on several measures. I will need to create a total score.

0.4 Eliminating / Filtering data

The survey contains an attention check. If participants did not pass the attention check, then they should not be included in later analyses.

```
# Check the variable type
class(df$Q7.1_24)
```

```
[1] "numeric"
```

```
# Q7.1_24 is the attention check item
# Participants were asked to:
# Please select '1 - no anxiety' for this question
# Any participant who did not select 1 should be removed
freq(as.ordered(df$Q7.1_24), plot = FALSE)
```

```
as.ordered(df$Q7.1_24)
      Frequency Percent Valid Percent Cum Percent
1         10518  83.675        93.377       93.38
2           165   1.313         1.465       94.84
3           250   1.989         2.219       97.06
4           179   1.424         1.589       98.65
5           152   1.209         1.349      100.00
NA's       1306  10.390
Total     12570 100.000       100.000
```

Drop any case that did not answer 1 to Q7.1_24.

```
# Drop cases where Q7.1_1 is NOT 1
# If this variable was text, then use quotes
df_attention <- df %>%
  filter(Q7.1_1 == 1)

head(df_attention)
```

```
# A tibble: 6 x 788
  unique_id survey_id country  language incentive participation_context progress
  <chr>     <chr>     <chr>    <chr>    <chr>     <chr>                    <dbl>
1 0903d70d  airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time      100
2 093d86f8  airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time      100
```

```
3 19fa5a1b   airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time       41
4 29df6c94   airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time      100
5 47afd764   airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time      100
6 502cc749   airlangga Indones~ Bahasa ~ Prize Dr~ Remotely, in own time      100
# i 781 more variables: duration <dbl>, start_date <chr>, end_date <chr>,
#   university <chr>, eligibility_ug <chr>, eligibility_stats <chr>,
#   degree_major <chr>, degree_minor <chr>, degree_level_maths <chr>,
#   degree_level_maths_specify <chr>, degree_year <chr>, age <chr>,
#   gender <chr>, spld <chr>, attention_amnesty <chr>, Q7.1_1 <dbl>,
#   Q7.1_2 <dbl>, Q7.1_3 <dbl>, Q7.1_4 <dbl>, Q7.1_5 <dbl>, Q7.1_6 <dbl>,
#   Q7.1_7 <dbl>, Q7.1_8 <dbl>, Q7.1_9 <dbl>, Q7.1_10 <dbl>, Q7.1_11 <dbl>, ...
```

0.5 Subsetting the Data

Limit the variables

```
# List of variables to keep
selected_vars <- c("unique_id", "survey_id", "country", "language", "incentive",
                   "age", "gender", "degree_major", "degree_level_maths",
                   "Q7.1_1", "Q7.1_2", "Q7.1_3", "Q7.1_4", "Q7.1_5", "Q7.1_6", "Q7.1_7", "Q7
                   "Q8.1_1", "Q8.1_2", "Q8.1_3", "Q8.1_4", "Q8.1_5", "Q8.1_6", "Q8.1_7", "Q8
                   "Q9.1_1", "Q9.1_2", "Q9.1_3", "Q9.1_4", "Q9.1_5", "Q9.1_6", "Q9.1_7", "Q9
                   "Q10.1_1", "Q10.1_2", "Q10.1_3", "Q10.1_4", "Q10.1_5",
                   "Q11.1_1", "Q11.1_2", "Q11.1_3", "Q11.1_4",
                   "Q12.1_1", "Q12.1_2", "Q12.1_3", "Q12.1_4",
                   "Q13.1_1", "Q13.1_2", "Q13.1_3", "Q13.1_4",
                   "Q14.1_1", "Q14.1_2", "Q14.1_3", "Q14.1_4",
                   "Q15.1_1", "Q15.1_2", "Q15.1_3", "Q15.1_4",
                   "Q16.1_1", "Q16.1_2", "Q16.1_3", "Q16.1_4",
                   "Q17.1", "Q17.2", "Q17.3")


# Create focused data frame with only variables that I might be using.
dfSubset <- df |>
  select(all_of(selected_vars))

head(dfSubset)


# A tibble: 6 x 71
  unique_id survey_id country   language     incentive age   gender degree_major
  <chr>     <chr>     <chr>     <chr>        <chr>     <chr> <chr>  <chr>
1 01057178  airlangga Indonesia Bahasa Indo~ Prize Dr~ 18-21 Male/~ Psychology
```

```
2 0300b5f2  airlangga Indonesia Bahasa Indo~ Prize Dr~ 18-21 Femal~ Psychology
3 03f6503b  airlangga Indonesia Bahasa Indo~ Prize Dr~ 22-25 Femal~ Psychology
4 0601d699  airlangga Indonesia Bahasa Indo~ Prize Dr~ <NA>  <NA>  Psychology
5 08b6cb02  airlangga Indonesia Bahasa Indo~ Prize Dr~ 18-21 Femal~ Psychology
6 0903d70d  airlangga Indonesia Bahasa Indo~ Prize Dr~ 18-21 Femal~ Psychology
# i 63 more variables: degree_level_maths <chr>, Q7.1_1 <dbl>, Q7.1_2 <dbl>,
#   Q7.1_3 <dbl>, Q7.1_4 <dbl>, Q7.1_5 <dbl>, Q7.1_6 <dbl>, Q7.1_7 <dbl>,
#   Q7.1_8 <dbl>, Q7.1_9 <dbl>, Q7.1_10 <dbl>, Q8.1_1 <dbl>, Q8.1_2 <dbl>,
#   Q8.1_3 <dbl>, Q8.1_4 <dbl>, Q8.1_5 <dbl>, Q8.1_6 <dbl>, Q8.1_7 <dbl>,
#   Q8.1_8 <dbl>, Q8.1_9 <dbl>, Q8.1_10 <dbl>, Q9.1_1 <dbl>, Q9.1_2 <dbl>,
#   Q9.1_3 <dbl>, Q9.1_4 <dbl>, Q9.1_5 <dbl>, Q9.1_6 <dbl>, Q9.1_7 <dbl>,
#   Q9.1_8 <dbl>, Q9.1_9 <dbl>, Q9.1_10 <dbl>, Q10.1_1 <dbl>, ...
```

0.6 Identifying and Handling Missing Data

Invalid values must be replaced with NA. The summary() function can help find variables that need to be modified.

```
summary(df)
```

```
 unique_id          survey_id           country            language
Length:12570       Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character   Class :character
Mode  :character   Mode  :character   Mode  :character   Mode  :character




 incentive         participation_context   progress         duration
Length:12570       Length:12570         Min.   : 14.00   Min.   :      61
Class :character   Class :character     1st Qu.: 98.00   1st Qu.:    1282
Mode  :character   Mode  :character     Median :100.00   Median :    1802
                                        Mean   : 90.15   Mean   :    8816
                                        3rd Qu.:100.00   3rd Qu.:    2651
                                        Max.   :100.00   Max.   :4141988

 start_date          end_date          university        eligibility_ug
Length:12570       Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character   Class :character
Mode  :character   Mode  :character   Mode  :character   Mode  :character
```

```
 eligibility_stats   degree_major        degree_minor        degree_level_maths
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character    Mode  :character




degree_level_maths_specify degree_year            age
Length:12570               Length:12570        Length:12570
Class :character           Class :character    Class :character
Mode  :character           Mode  :character    Mode  :character




    gender              spld            attention_amnesty      Q7.1_1
Length:12570        Length:12570        Length:12570        Min.   :1.000
Class :character    Class :character    Class :character    1st Qu.:2.000
Mode  :character    Mode  :character    Mode  :character    Median :3.000
                                                            Mean   :3.229
                                                            3rd Qu.:4.000
                                                            Max.   :5.000
                                                            NA's   :457
    Q7.1_2              Q7.1_3              Q7.1_4              Q7.1_5
Min.   :1.000       Min.   :1.000       Min.   :1.000       Min.   :1.000
1st Qu.:2.000       1st Qu.:2.000       1st Qu.:2.000       1st Qu.:2.000
Median :3.000       Median :3.000       Median :3.000       Median :3.000
Mean   :2.696       Mean   :2.817       Mean   :2.858       Mean   :2.687
3rd Qu.:4.000       3rd Qu.:4.000       3rd Qu.:4.000       3rd Qu.:4.000
Max.   :5.000       Max.   :5.000       Max.   :5.000       Max.   :5.000
NA's   :458         NA's   :453         NA's   :451         NA's   :457
    Q7.1_6              Q7.1_7              Q7.1_8              Q7.1_9             Q7.1_10
Min.   :1.000       Min.   :1.000       Min.   :1.000       Min.   :1.00       Min.   :1.000
1st Qu.:1.000       1st Qu.:2.000       1st Qu.:3.000       1st Qu.:1.00       1st Qu.:3.000
Median :2.000       Median :3.000       Median :4.000       Median :2.00       Median :4.000
Mean   :2.424       Mean   :3.167       Mean   :3.841       Mean   :2.03       Mean   :3.647
3rd Qu.:3.000       3rd Qu.:4.000       3rd Qu.:5.000       3rd Qu.:3.00       3rd Qu.:5.000
Max.   :5.000       Max.   :5.000       Max.   :5.000       Max.   :5.00       Max.   :5.000
NA's   :467         NA's   :461         NA's   :454         NA's   :457        NA's   :459
```

```
    Q7.1_11           Q7.1_12           Q7.1_13           Q7.1_14
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000    1st Qu.:2.000
Median :3.000    Median :2.000    Median :3.000    Median :3.000
Mean   :2.698    Mean   :2.583    Mean   :3.374    Mean   :2.654
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :461      NA's   :454      NA's   :462      NA's   :459
    Q7.1_15           Q7.1_16           Q7.1_17           Q7.1_18
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:3.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:1.000
Median :4.000    Median :3.000    Median :2.000    Median :2.000
Mean   :3.607    Mean   :2.711    Mean   :2.362    Mean   :2.461
3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:3.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :452      NA's   :463      NA's   :457      NA's   :460
    Q7.1_19           Q7.1_20           Q7.1_21           Q7.1_22
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000
Median :2.000    Median :3.000    Median :2.000    Median :3.000
Mean   :2.612    Mean   :2.735    Mean   :2.576    Mean   :3.048
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :453      NA's   :458      NA's   :458      NA's   :463
    Q7.1_23           Q7.1_24           Q7.2_1            Q7.2_2
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:2.000    1st Qu.:3.000
Median :2.000    Median :1.000    Median :3.000    Median :4.000
Mean   :2.314    Mean   :1.161    Mean   :3.162    Mean   :3.657
3rd Qu.:3.000    3rd Qu.:1.000    3rd Qu.:4.000    3rd Qu.:5.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :460      NA's   :1306     NA's   :460      NA's   :453
    Q7.2_3            Q7.2_4            Q7.2_5            Q7.2_6
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:3.000    1st Qu.:3.000    1st Qu.:2.000    1st Qu.:3.000
Median :4.000    Median :4.000    Median :3.000    Median :4.000
Mean   :3.577    Mean   :4.025    Mean   :3.167    Mean   :3.687
3rd Qu.:5.000    3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:5.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :462      NA's   :457      NA's   :462      NA's   :457
    Q7.2_7            Q7.2_8            Q7.2_9            Q7.2_10
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:3.000    1st Qu.:2.000    1st Qu.:3.000    1st Qu.:4.000
```

```
Median :4.000    Median :3.000    Median :4.000    Median :5.000
Mean   :3.901    Mean   :3.099    Mean   :3.791    Mean   :4.141
3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:5.000    3rd Qu.:5.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :462      NA's   :466      NA's   :455      NA's   :451
    Q7.2_11          Q7.2_12          Q7.2_13          Q7.2_14
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :3.000    Median :3.000    Median :3.000    Median :3.000
Mean   :3.003    Mean   :2.879    Mean   :2.825    Mean   :2.912
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :463      NA's   :460      NA's   :466      NA's   :459
    Q7.2_15          Q7.2_16          Q7.2_17          Q7.2_18
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
Median :1.000    Median :2.000    Median :2.000    Median :2.000
Mean   :1.846    Mean   :2.406    Mean   :2.592    Mean   :2.432
3rd Qu.:2.000    3rd Qu.:3.000    3rd Qu.:4.000    3rd Qu.:3.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :460      NA's   :457      NA's   :467      NA's   :461
    Q7.2_19          Q7.2_20          Q7.2_21          Q7.2_22
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
Median :2.000    Median :2.000    Median :2.000    Median :2.000
Mean   :2.447    Mean   :2.397    Mean   :2.575    Mean   :2.437
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.000    3rd Qu.:3.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :462      NA's   :551      NA's   :556      NA's   :558
    Q7.2_23          Q8.1_1           Q8.1_2           Q8.1_3
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :3.000    Median :3.000    Median :3.000    Median :3.000
Mean   :2.703    Mean   :3.213    Mean   :2.628    Mean   :2.777
3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :555      NA's   :451      NA's   :442      NA's   :440
    Q8.1_4           Q8.1_5           Q8.1_6           Q8.1_7
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000
Median :3.000    Median :3.000    Median :2.000    Median :3.000
Mean   :2.741    Mean   :2.619    Mean   :2.474    Mean   :2.862
3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.000
```

```
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :444      NA's   :448      NA's   :447      NA's   :442
    Q8.1_8           Q8.1_9           Q8.1_10          Q8.1_11
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:3.000    1st Qu.:3.000    1st Qu.:1.000    1st Qu.:2.000
Median :4.000    Median :4.000    Median :1.000    Median :3.000
Mean   :3.762    Mean   :3.622    Mean   :1.947    Mean   :3.366
3rd Qu.:5.000    3rd Qu.:5.000    3rd Qu.:3.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :441      NA's   :447      NA's   :443      NA's   :440
    Q8.1_12          Q8.1_13          Q8.1_14          Q8.1_15          Q8.1_16
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00     Min.   :1.000
1st Qu.:2.000    1st Qu.:3.000    1st Qu.:2.000    1st Qu.:1.00     1st Qu.:2.000
Median :3.000    Median :4.000    Median :3.000    Median :2.00     Median :2.000
Mean   :2.837    Mean   :3.601    Mean   :2.692    Mean   :2.45     Mean   :2.618
3rd Qu.:4.000    3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:3.00     3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00     Max.   :5.000
NA's   :446      NA's   :441      NA's   :447      NA's   :441      NA's   :452
    Q8.1_17          Q8.1_18          Q8.1_19          Q8.1_20
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000    1st Qu.:1.000
Median :2.000    Median :2.000    Median :3.000    Median :2.000
Mean   :2.602    Mean   :2.612    Mean   :3.019    Mean   :2.301
3rd Qu.:3.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:3.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :443      NA's   :447      NA's   :439      NA's   :449
    Q8.1_21          Q8.2_1           Q8.2_2           Q8.2_3           Q8.2_4
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00     Min.   :1.000
1st Qu.:5.000    1st Qu.:2.000    1st Qu.:3.000    1st Qu.:3.00     1st Qu.:3.000
Median :5.000    Median :3.000    Median :4.000    Median :4.00     Median :4.000
Mean   :4.788    Mean   :3.067    Mean   :3.659    Mean   :3.51     Mean   :3.971
3rd Qu.:5.000    3rd Qu.:4.000    3rd Qu.:5.000    3rd Qu.:5.00     3rd Qu.:5.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00     Max.   :5.000
NA's   :1282     NA's   :446      NA's   :444      NA's   :456      NA's   :455
    Q8.2_5           Q8.2_6           Q8.2_7           Q8.2_8
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:3.000    1st Qu.:3.000    1st Qu.:2.000
Median :3.000    Median :4.000    Median :4.000    Median :3.000
Mean   :3.084    Mean   :3.622    Mean   :3.836    Mean   :3.099
3rd Qu.:4.000    3rd Qu.:5.000    3rd Qu.:5.000    3rd Qu.:4.000
Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
NA's   :450      NA's   :457      NA's   :447      NA's   :444
    Q8.2_9           Q8.2_10          Q8.2_11          Q8.2_12          Q8.2_13
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Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.00   Min.   :1.000
1st Qu.:3.000   1st Qu.:3.000   1st Qu.:1.000   1st Qu.:1.00   1st Qu.:1.000
Median :4.000   Median :4.000   Median :1.000   Median :2.00   Median :2.000
Mean   :3.717   Mean   :4.029   Mean   :1.602   Mean   :2.15   Mean   :1.977
3rd Qu.:5.000   3rd Qu.:5.000   3rd Qu.:2.000   3rd Qu.:3.00   3rd Qu.:3.000
Max.   :5.000   Max.   :5.000   Max.   :5.000   Max.   :5.00   Max.   :5.000
NA's   :453     NA's   :459     NA's   :444     NA's   :446    NA's   :451
   Q8.2_14         Q8.2_15         Q8.2_16         Q8.2_17         Q8.2_18
Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.00   Min.   :1.000
1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.00   1st Qu.:1.000
Median :2.000   Median :2.000   Median :1.000   Median :2.00   Median :2.000
Mean   :2.191   Mean   :2.368   Mean   :1.783   Mean   :2.36   Mean   :2.603
3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:2.000   3rd Qu.:3.00   3rd Qu.:4.000
Max.   :5.000   Max.   :5.000   Max.   :5.000   Max.   :5.00   Max.   :5.000
NA's   :444     NA's   :455     NA's   :458     NA's   :446    NA's   :457
   Q8.2_19         Q8.2_20         Q8.2_21         Q8.2_22
Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
1st Qu.:1.000   1st Qu.:1.000   1st Qu.:2.000   1st Qu.:2.000
Median :2.000   Median :2.000   Median :3.000   Median :3.000
Mean   :2.351   Mean   :2.382   Mean   :3.152   Mean   :3.181
3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:5.000   3rd Qu.:5.000
Max.   :5.000   Max.   :5.000   Max.   :5.000   Max.   :5.000
NA's   :449     NA's   :459     NA's   :548     NA's   :543
   Q8.2_23         Q8.2_24         Q9.1_1          Q9.1_2
Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
1st Qu.:2.000   1st Qu.:2.000   1st Qu.:1.000   1st Qu.:1.000
Median :3.000   Median :3.000   Median :2.000   Median :2.000
Mean   :3.212   Mean   :3.223   Mean   :2.206   Mean   :2.111
3rd Qu.:5.000   3rd Qu.:5.000   3rd Qu.:3.000   3rd Qu.:3.000
Max.   :5.000   Max.   :5.000   Max.   :4.000   Max.   :4.000
NA's   :556     NA's   :549     NA's   :1515    NA's   :1511
   Q9.1_3          Q9.1_4          Q9.1_5          Q9.1_6
Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
1st Qu.:2.000   1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.000
Median :2.000   Median :2.000   Median :2.000   Median :2.000
Mean   :2.393   Mean   :2.353   Mean   :2.296   Mean   :1.855
3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:2.000
Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.000
NA's   :1512    NA's   :1514    NA's   :1512    NA's   :1514
   Q9.1_7          Q9.1_8          Q9.1_9          Q9.1_10
Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.000   1st Qu.:2.000
Median :2.000   Median :2.000   Median :2.000   Median :3.000
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Mean   :1.907    Mean   :1.943    Mean   :2.346    Mean   :2.724
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
NA's   :1511     NA's   :1517     NA's   :1513     NA's   :1513
    Q9.1_11          Q9.1_12          Q9.1_13          Q9.1_14
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
Median :2.000    Median :2.000    Median :2.000    Median :2.000
Mean   :2.285    Mean   :2.016    Mean   :2.238    Mean   :1.799
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:2.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
NA's   :1519     NA's   :1513     NA's   :1510     NA's   :1518
    Q9.1_15          Q9.1_16          Q9.1_17          Q9.1_18          Q9.1_19
Min.   :1.000    Min.   :1.00     Min.   :1.000    Min.   :1.00     Min.   :1.000
1st Qu.:1.000    1st Qu.:2.00     1st Qu.:2.000    1st Qu.:1.00     1st Qu.:2.000
Median :2.000    Median :2.00     Median :2.000    Median :2.00     Median :3.000
Mean   :1.894    Mean   :2.47     Mean   :2.451    Mean   :1.84     Mean   :2.509
3rd Qu.:2.000    3rd Qu.:3.00     3rd Qu.:3.000    3rd Qu.:2.00     3rd Qu.:3.000
Max.   :4.000    Max.   :4.00     Max.   :4.000    Max.   :4.00     Max.   :4.000
NA's   :1509     NA's   :1510     NA's   :1514     NA's   :1511     NA's   :1515
    Q9.1_20          Q9.1_21          Q9.1_22          Q10.1_1          Q10.1_2
Min.   :1.000    Min.   :1.000    Min.   :1.00     Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.00     1st Qu.:1.000    1st Qu.:1.000
Median :2.000    Median :2.000    Median :1.00     Median :2.000    Median :2.000
Mean   :2.196    Mean   :1.981    Mean   :1.08     Mean   :2.312    Mean   :2.237
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:1.00     3rd Qu.:3.000    3rd Qu.:3.000
Max.   :4.000    Max.   :4.000    Max.   :4.00     Max.   :4.000    Max.   :4.000
NA's   :1514     NA's   :1515     NA's   :2328     NA's   :1495     NA's   :1502
    Q10.1_3          Q10.1_4          Q10.1_5          Q10.1_6
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :2.000    Median :3.000    Median :3.000    Median :3.000
Mean   :2.422    Mean   :2.735    Mean   :2.702    Mean   :3.054
3rd Qu.:3.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
NA's   :1496     NA's   :1496     NA's   :1496     NA's   :1495
    Q10.1_7          Q10.1_8          Q10.1_9          Q10.1_10
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
Median :2.000    Median :2.000    Median :2.000    Median :2.000
Mean   :2.159    Mean   :2.135    Mean   :1.927    Mean   :1.934
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:2.000    3rd Qu.:3.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
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 NA's   :1494    NA's   :1495    NA's   :1496    NA's   :1494
    Q10.1_11        Q10.1_12        Q10.1_13        Q10.1_14        Q10.1_15
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.00
 1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:1.00
 Median :2.000   Median :3.000   Median :3.000   Median :2.000   Median :2.00
 Mean   :2.549   Mean   :2.919   Mean   :2.969   Mean   :2.394   Mean   :2.11
 3rd Qu.:3.000   3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:3.000   3rd Qu.:3.00
 Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.00
 NA's   :1495    NA's   :1501    NA's   :1496    NA's   :1491    NA's   :1493
    Q10.1_16        Q10.1_17        Q10.1_18        Q10.1_19        Q10.1_20
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.00    Min.   :1.000
 1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.00    1st Qu.:1.000
 Median :2.000   Median :2.000   Median :2.000   Median :2.00    Median :1.000
 Mean   :2.065   Mean   :2.027   Mean   :2.112   Mean   :1.89    Mean   :1.821
 3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:3.000   3rd Qu.:2.00    3rd Qu.:2.000
 Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.00    Max.   :4.000
 NA's   :1499    NA's   :1503    NA's   :1497    NA's   :1495    NA's   :1498
    Q10.1_21        Q10.1_22        Q10.1_23        Q10.1_24
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.000   1st Qu.:2.000
 Median :2.000   Median :1.000   Median :2.000   Median :2.000
 Mean   :2.148   Mean   :1.602   Mean   :2.203   Mean   :2.402
 3rd Qu.:3.000   3rd Qu.:2.000   3rd Qu.:3.000   3rd Qu.:3.000
 Max.   :4.000   Max.   :4.000   Max.   :4.000   Max.   :4.000
 NA's   :1498    NA's   :1495    NA's   :1495    NA's   :1497
    Q10.1_25        Q11.1_1         Q11.1_2         Q11.1_3
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000
 Median :3.000   Median :3.000   Median :3.000   Median :3.000
 Mean   :2.899   Mean   :3.047   Mean   :2.952   Mean   :2.951
 3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.000
 Max.   :4.000   Max.   :5.000   Max.   :5.000   Max.   :5.000
 NA's   :1498    NA's   :1470    NA's   :1476    NA's   :1475
    Q11.1_4         Q11.1_5         Q11.1_6         Q11.1_7
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1.000
 1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000   1st Qu.:2.000
 Median :3.000   Median :3.000   Median :3.000   Median :3.000
 Mean   :2.952   Mean   :3.058   Mean   :3.241   Mean   :3.213
 3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.000   3rd Qu.:4.000
 Max.   :5.000   Max.   :5.000   Max.   :5.000   Max.   :5.000
 NA's   :1477    NA's   :1476    NA's   :1476    NA's   :1472
    Q11.1_8         Q11.1_9         Q12.1_1         Q12.1_2         Q12.1_3
 Min.   :1.000   Min.   :1.000   Min.   :1.000   Min.   :1       Min.   :1.000
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1st Qu.:2.000    1st Qu.:3.000    1st Qu.:1.000    1st Qu.:1       1st Qu.:1.000
Median :3.000    Median :3.000    Median :1.000    Median :2      Median :1.000
Mean   :3.262    Mean   :2.977    Mean   :1.763    Mean   :2      Mean   :1.756
3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:2.000    3rd Qu.:3      3rd Qu.:2.000
Max.   :5.000    Max.   :5.000    Max.   :4.000    Max.   :4      Max.   :4.000
NA's   :1475     NA's   :2284     NA's   :1494     NA's   :1496   NA's   :1496
    Q12.1_4          Q12.1_5          Q12.1_6          Q12.1_7          Q12.1_8
Min.   :1.00     Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.00     1st Qu.:2.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.000
Median :1.00     Median :3.000    Median :3.000    Median :2.000    Median :3.000
Mean   :1.71     Mean   :2.547    Mean   :3.006    Mean   :2.078    Mean   :2.661
3rd Qu.:2.00     3rd Qu.:3.000    3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:3.000
Max.   :4.00     Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
NA's   :1501     NA's   :1493     NA's   :1495     NA's   :1497     NA's   :1494
    Q12.1_9          Q12.1_10         Q12.1_11         Q12.1_12
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :2.000    Median :3.000    Median :2.000    Median :2.000
Mean   :2.399    Mean   :2.522    Mean   :2.229    Mean   :2.305
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:3.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
NA's   :1495     NA's   :1492     NA's   :1495     NA's   :1497
    Q12.1_13         Q12.1_14         Q12.1_15         Q12.1_16
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000
Median :2.000    Median :2.000    Median :3.000    Median :3.000
Mean   :1.837    Mean   :2.472    Mean   :2.676    Mean   :2.807
3rd Qu.:2.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.000
NA's   :1492     NA's   :1493     NA's   :1494     NA's   :1495
    Q12.1_17         Q12.1_18         Q12.1_19         Q12.1_20         Q12.1_21
Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00     Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000    1st Qu.:1.000    1st Qu.:2.00     1st Qu.:2.000
Median :3.000    Median :2.000    Median :2.000    Median :3.00     Median :3.000
Mean   :2.651    Mean   :2.433    Mean   :2.254    Mean   :2.83     Mean   :2.672
3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.00     3rd Qu.:3.000
Max.   :4.000    Max.   :4.000    Max.   :4.000    Max.   :4.00     Max.   :4.000
NA's   :1494     NA's   :1493     NA's   :1493     NA's   :1496     NA's   :1499
    Q12.1_22         Q12.1_23         Q12.1_24         Q13.1_1          Q13.1_2
Min.   :1.00     Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
1st Qu.:1.00     1st Qu.:1.000    1st Qu.:1.000    1st Qu.:2.000    1st Qu.:2.000
Median :2.00     Median :2.000    Median :2.000    Median :3.000    Median :3.000
Mean   :2.11     Mean   :2.319    Mean   :2.185    Mean   :2.742    Mean   :2.914
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3rd Qu.:3.00     3rd Qu.:3.000     3rd Qu.:3.000     3rd Qu.:4.000     3rd Qu.:4.000
Max.   :4.00     Max.   :4.000     Max.   :4.000     Max.   :5.000     Max.   :5.000
NA's   :1496     NA's   :1497      NA's   :1496      NA's   :1491      NA's   :1493
    Q13.1_3          Q13.1_4           Q13.1_5           Q13.1_6           Q13.1_7
Min.   :1.000    Min.   :1.00      Min.   :1.000     Min.   :1.000     Min.   :1.000
1st Qu.:2.000    1st Qu.:2.00      1st Qu.:2.000     1st Qu.:2.000     1st Qu.:2.000
Median :2.000    Median :2.00      Median :3.000     Median :3.000     Median :3.000
Mean   :2.568    Mean   :2.57      Mean   :2.752     Mean   :2.924     Mean   :2.679
3rd Qu.:3.000    3rd Qu.:3.00      3rd Qu.:4.000     3rd Qu.:4.000     3rd Qu.:4.000
Max.   :5.000    Max.   :5.00      Max.   :5.000     Max.   :5.000     Max.   :5.000
NA's   :1494     NA's   :1495      NA's   :1491      NA's   :1492      NA's   :1494
    Q13.1_8          Q13.1_9           Q13.1_10          Q13.1_11          Q13.1_12
Min.   :1.000    Min.   :1.00      Min.   :1.000     Min.   :1.000     Min.   :1.000
1st Qu.:2.000    1st Qu.:1.00      1st Qu.:1.000     1st Qu.:2.000     1st Qu.:2.000
Median :3.000    Median :2.00      Median :2.000     Median :2.000     Median :2.000
Mean   :2.615    Mean   :2.33      Mean   :2.351     Mean   :2.417     Mean   :2.532
3rd Qu.:3.000    3rd Qu.:3.00      3rd Qu.:3.000     3rd Qu.:3.000     3rd Qu.:3.000
Max.   :5.000    Max.   :5.00      Max.   :5.000     Max.   :5.000     Max.   :5.000
NA's   :1491     NA's   :1496      NA's   :1491      NA's   :1496      NA's   :1495
    Q13.1_13         Q13.1_14          Q13.1_15          Q13.1_16
Min.   :1.000    Min.   :1.000     Min.   :1.000     Min.   :1.000
1st Qu.:2.000    1st Qu.:1.000     1st Qu.:2.000     1st Qu.:2.000
Median :3.000    Median :2.000     Median :2.000     Median :2.000
Mean   :2.597    Mean   :2.322     Mean   :2.406     Mean   :2.489
3rd Qu.:3.000    3rd Qu.:3.000     3rd Qu.:3.000     3rd Qu.:3.000
Max.   :5.000    Max.   :5.000     Max.   :5.000     Max.   :5.000
NA's   :1490     NA's   :1488      NA's   :1496      NA's   :1492
    Q13.1_17         Q14.1_1           Q14.1_2           Q14.1_3
Min.   :1.000    Min.   :1.000     Min.   :1.000     Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000     1st Qu.:3.000     1st Qu.:2.000
Median :2.000    Median :3.000     Median :4.000     Median :3.000
Mean   :2.057    Mean   :2.927     Mean   :3.465     Mean   :2.682
3rd Qu.:2.000    3rd Qu.:4.000     3rd Qu.:4.000     3rd Qu.:4.000
Max.   :5.000    Max.   :5.000     Max.   :5.000     Max.   :5.000
NA's   :2304     NA's   :1497      NA's   :1500      NA's   :1500
    Q14.1_4          Q14.1_5           Q14.1_6           Q14.1_7
Min.   :1.000    Min.   :1.000     Min.   :1.000     Min.   :1.000
1st Qu.:2.000    1st Qu.:2.000     1st Qu.:1.000     1st Qu.:2.000
Median :3.000    Median :3.000     Median :2.000     Median :3.000
Mean   :2.974    Mean   :2.702     Mean   :2.527     Mean   :3.008
3rd Qu.:4.000    3rd Qu.:4.000     3rd Qu.:3.000     3rd Qu.:4.000
Max.   :5.000    Max.   :5.000     Max.   :5.000     Max.   :5.000
NA's   :1497     NA's   :1499      NA's   :1498      NA's   :1498
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      Q14.1_8            Q14.1_9           Q14.1_10            Q14.1_11            Q14.1_12
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00
 1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.00
 Median :3.000    Median :3.000    Median :3.000    Median :3.000    Median :3.00
 Mean   :3.168    Mean   :2.667    Mean   :2.676    Mean   :3.228    Mean   :2.64
 3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.00
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00
 NA's   :1500     NA's   :1499     NA's   :1496     NA's   :1496     NA's   :1500
     Q15.1_1            Q15.1_2            Q15.1_3            Q15.1_4
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
 1st Qu.:3.000    1st Qu.:3.000    1st Qu.:4.000    1st Qu.:3.000
 Median :4.000    Median :3.000    Median :4.000    Median :4.000
 Mean   :3.713    Mean   :3.346    Mean   :3.863    Mean   :3.693
 3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
 NA's   :1471     NA's   :1468     NA's   :1468     NA's   :1465
     Q15.1_5            Q15.1_6            Q15.1_7            Q15.1_8
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
 1st Qu.:3.000    1st Qu.:3.000    1st Qu.:3.000    1st Qu.:3.000
 Median :4.000    Median :4.000    Median :3.000    Median :4.000
 Mean   :3.777    Mean   :3.664    Mean   :3.348    Mean   :3.525
 3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:4.000
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000
 NA's   :1464     NA's   :1466     NA's   :1468     NA's   :1466
     Q15.1_9            Q16.1_1            Q16.1_2            Q16.1_3            Q16.1_4
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.00
 1st Qu.:4.000    1st Qu.:3.000    1st Qu.:2.000    1st Qu.:2.000    1st Qu.:2.00
 Median :4.000    Median :4.000    Median :2.000    Median :2.000    Median :3.00
 Mean   :3.949    Mean   :3.771    Mean   :2.289    Mean   :2.481    Mean   :2.63
 3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:3.000    3rd Qu.:4.00
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :5.00
 NA's   :2285     NA's   :1485     NA's   :1487     NA's   :1489     NA's   :1487
     Q16.1_5            Q16.1_6            Q16.1_7            Q17.1
 Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :0.000e+00
 1st Qu.:2.000    1st Qu.:3.000    1st Qu.:2.000    1st Qu.:4.000e+00
 Median :3.000    Median :4.000    Median :2.000    Median :8.000e+00
 Mean   :2.876    Mean   :3.587    Mean   :2.609    Mean   :7.894e+05
 3rd Qu.:4.000    3rd Qu.:4.000    3rd Qu.:3.000    3rd Qu.:8.000e+00
 Max.   :5.000    Max.   :5.000    Max.   :5.000    Max.   :1.552e+09
 NA's   :1486     NA's   :1485     NA's   :1486     NA's   :1575
     Q17.2              Q17.3               Q18.1              crt_check1
 Min.   :0.000e+00   Min.   :0.000e+00   Length:12570      Min.   :     0
 1st Qu.:1.000e+01   1st Qu.:2.000e+01   Class :character  1st Qu.:     2
```

```
Median :5.000e+01   Median :2.000e+01   Mode :character   Median :      2
Mean   :9.665e+04   Mean   :5.038e+07                     Mean   :    622
3rd Qu.:5.000e+01   3rd Qu.:3.900e+01                     3rd Qu.:      3
Max.   :1.061e+09   Max.   :5.498e+11                     Max.   :6767674
NA's   :1579        NA's   :1599                          NA's   :1645
 crt_check2         do_block_crt     do_block_big      do_q_crt_1
Length:12570        Min.   :1.000    Min.   :1.000    Min.   :1.000
Class :character    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
Mode  :character    Median :1.000    Median :2.000    Median :2.000
                    Mean   :1.489    Mean   :1.504    Mean   :1.987
                    3rd Qu.:2.000    3rd Qu.:2.000    3rd Qu.:3.000
                    Max.   :2.000    Max.   :2.000    Max.   :3.000
                    NA's   :1428     NA's   :1597     NA's   :3442
   do_q_crt_2         do_q_crt_3     math_edu_type      math_edu_type_other
Min.   :1.000     Min.   :1.000    Length:12570       Length:12570
1st Qu.:1.000     1st Qu.:1.000    Class :character   Class :character
Median :2.000     Median :2.000    Mode  :character   Mode  :character
Mean   :1.995     Mean   :2.018
3rd Qu.:3.000     3rd Qu.:3.000
Max.   :3.000     Max.   :3.000
NA's   :3442      NA's   :3442
math_edu_grade      math_edu_mths      math_edu_level      math_edu_level_other
Length:12570        Length:12570       Length:12570        Length:12570
Class :character    Class :character   Class :character    Class :character
Mode  :character    Mode  :character   Mode  :character    Mode  :character




math_edu_grade_yr10 math_edu_grade_yr11_entry math_edu_grade_yr11_int
Length:12570        Length:12570              Length:12570
Class :character    Class :character          Class :character
Mode  :character    Mode  :character          Mode  :character




math_edu_grade_yr11_adv math_edu_grade_other math_edu_mths_yr10
Length:12570            Length:12570         Length:12570
Class :character        Class :character     Class :character
Mode  :character        Mode  :character     Mode  :character
```

```
math_edu_mths_yr11_entry math_edu_mths_yr11_int math_edu_mths_yr11_adv
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_mths_other math_edu_primary_level math_edu_grade_grade10
Length:12570        Length:12570           Length:12570
Class :character    Class :character       Class :character
Mode  :character    Mode  :character       Mode  :character




math_edu_grade_grade11 math_edu_grade_grade12 math_edu_mths_grade10
Length:12570           Length:12570           Length:12570
Class :character       Class :character       Class :character
Mode  :character       Mode  :character       Mode  :character




math_edu_mths_grade11 math_edu_mths_grade12 math_edu_grade12_course1
Length:12570          Length:12570          Length:12570
Class :character      Class :character      Class :character
Mode  :character      Mode  :character      Mode  :character




math_edu_grade12_course2 math_edu_grade12_course3 math_edu_grade12_course4
Length:12570             Length:12570             Length:12570
Class :character         Class :character         Class :character
Mode  :character         Mode  :character         Mode  :character




math_edu_grade12_course5 math_edu_grade12_course6 math_edu_grade12_course7
```

```
Length:12570          Length:12570          Length:12570
Class :character      Class :character      Class :character
Mode  :character      Mode  :character      Mode  :character




math_edu_grade12_course8 math_edu_grade12_course7_specify
Length:12570          Length:12570
Class :character      Class :character
Mode  :character      Mode  :character




math_edu_grade12_course8_specify math_edu_grade_grade10a
Length:12570              Length:12570
Class :character         Class :character
Mode  :character         Mode  :character




math_edu_grade_grade11a math_edu_grade_grade12_course1
Length:12570          Length:12570
Class :character      Class :character
Mode  :character      Mode  :character




math_edu_grade_grade12_course2 math_edu_grade_grade12_course3
Length:12570              Length:12570
Class :character         Class :character
Mode  :character         Mode  :character




math_edu_grade_grade12_course4 math_edu_grade_grade12_course5
Length:12570              Length:12570
Class :character         Class :character
Mode  :character         Mode  :character
```

```
math_edu_grade_grade12_course6 math_edu_grade_grade12_course7
Length:12570                    Length:12570
Class :character                Class :character
Mode  :character                Mode  :character




math_edu_grade_grade12_course8 math_edu_mths_grade10a math_edu_mths_grade11a
Length:12570                    Length:12570           Length:12570
Class :character                Class :character       Class :character
Mode  :character                Mode  :character       Mode  :character




math_edu_mths_grade12_course1 math_edu_mths_grade12_course2
Length:12570                   Length:12570
Class :character               Class :character
Mode  :character               Mode  :character




math_edu_mths_grade12_course3 math_edu_mths_grade12_course4
Length:12570                   Length:12570
Class :character               Class :character
Mode  :character               Mode  :character




math_edu_mths_grade12_course5 math_edu_mths_grade12_course6
Length:12570                   Length:12570
Class :character               Class :character
Mode  :character               Mode  :character
```

```
math_edu_mths_grade12_course7 math_edu_mths_grade12_course8
Length:12570                   Length:12570
Class :character               Class :character
Mode  :character               Mode  :character




math_edu_grade_grade10b math_edu_grade_grade11b math_edu_mths_grade10b
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_mths_grade11b math_edu_grade_grade10c math_edu_mths_grade10c
Length:12570           Length:12570            Length:12570
Class :character       Class :character        Class :character
Mode  :character       Mode  :character        Mode  :character




math_edu_pre_uni_course1 math_edu_pre_uni_grade1 math_edu_pre_uni_course2
Length:12570             Length:12570            Length:12570
Class :character         Class :character        Class :character
Mode  :character         Mode  :character        Mode  :character




math_edu_pre_uni_grade2 math_edu_pre_uni_course3 math_edu_pre_uni_grade3
Length:12570            Length:12570             Length:12570
Class :character        Class :character         Class :character
Mode  :character        Mode  :character         Mode  :character




math_edu_pre_uni_course4 math_edu_pre_uni_grade4 math_edu_pre_uni_mths1
Length:12570             Length:12570            Length:12570
```

```
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_pre_uni_mths2 math_edu_pre_uni_mths3 math_edu_pre_uni_mths4
Length:12570           Length:12570           Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




math_edu_grade_gcse math_edu_grade_as_level math_edu_grade_a_level
Length:12570        Length:12570            Length:12570
Class :character    Class :character        Class :character
Mode  :character    Mode  :character        Mode  :character




math_edu_mths_gcse math_edu_mths_as_level math_edu_mths_a_level
Length:12570       Length:12570           Length:12570
Class :character   Class :character       Class :character
Mode  :character   Mode  :character       Mode  :character




math_edu_grade_jnr_cert math_edu_grade_leaving_cert_app
Length:12570            Length:12570
Class :character        Class :character
Mode  :character        Mode  :character




math_edu_grade_leaving_cert math_edu_mths_jnr_cert
Length:12570                Length:12570
Class :character            Class :character
Mode  :character            Mode  :character
```

```
math_edu_mths_leaving_cert_app math_edu_mths_leaving_cert
Length:12570                   Length:12570
Class :character               Class :character
Mode  :character               Mode  :character



math_edu_grade_standard math_edu_grade_higher math_edu_grade_adv_higher
Length:12570            Length:12570          Length:12570
Class :character        Class :character      Class :character
Mode  :character        Mode  :character      Mode  :character



math_edu_mths_standard math_edu_mths_higher math_edu_mths_adv_higher
Length:12570           Length:12570         Length:12570
Class :character       Class :character     Class :character
Mode  :character       Mode  :character     Mode  :character



math_edu_grade_act math_edu_grade_sat math_edu_type_act  math_edu_type_sat
Length:12570       Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character   Class :character
Mode  :character   Mode  :character   Mode  :character   Mode  :character



math_edu_type_none math_edu_type_specify math_edu_mths_act  math_edu_mths_sat
Length:12570       Length:12570          Length:12570       Length:12570
Class :character   Class :character      Class :character   Class :character
Mode  :character   Mode  :character      Mode  :character   Mode  :character
```

```
math_edu_grade_vwo_wiskunde_a math_edu_grade_vwo_wiskunde_b
Length:12570               Length:12570
Class :character           Class :character
Mode  :character           Mode  :character




math_edu_grade_vwo_wiskunde_c math_edu_grade_wiskundetoets
Length:12570               Length:12570
Class :character           Class :character
Mode  :character           Mode  :character




math_edu_grade_abitur_matura math_edu_mths_vwo_wiskunde_a
Length:12570               Length:12570
Class :character           Class :character
Mode  :character           Mode  :character




math_edu_mths_vwo_wiskunde_b math_edu_mths_vwo_wiskunde_c
Length:12570               Length:12570
Class :character           Class :character
Mode  :character           Mode  :character




math_edu_mths_wiskundetoets math_edu_mths_abitur_matura
Length:12570               Length:12570
Class :character           Class :character
Mode  :character           Mode  :character




maths_edu_grade_10th_std_scc maths_edu_grade_12th_std_hsc
Length:12570               Length:12570
Class :character           Class :character
```

```
Mode   :character              Mode   :character




maths_edu_mths_10th_std_scc maths_edu_mths_12th_std_hsc
Length:12570               Length:12570
Class :character           Class :character
Mode   :character              Mode   :character




math_edu_grade_olevel_spm math_edu_mths_o_level_spm math_edu_mths_uec_stpm_etc
Length:12570               Length:12570               Length:12570
Class :character           Class :character           Class :character
Mode   :character              Mode   :character              Mode   :character




math_edu_grade_high_school math_edu_grade_senior_high
Length:12570               Length:12570
Class :character           Class :character
Mode   :character              Mode   :character




math_edu_mths_high_school math_edu_mths_senior_high math_edu_grade_mittlere
Length:12570               Length:12570               Length:12570
Class :character           Class :character           Class :character
Mode   :character              Mode   :character              Mode   :character




math_edu_grade_matura_abitur math_edu_mths_mittlere
Length:12570               Length:12570
Class :character           Class :character
Mode   :character              Mode   :character
```

```
math_edu_mths_matura_abitur  math_edu_uni_entrance_option
Length:12570                 Length:12570
Class :character             Class :character
Mode  :character             Mode  :character




math_edu_bacc_modality  math_edu_yrs        math_edu_grade_hochschulreife
Length:12570            Length:12570        Length:12570
Class :character        Class :character    Class :character
Mode  :character        Mode  :character    Mode  :character




math_edu_mths_hochschulreife  math_edu_grade_brevet_colleges
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_grade_baccalaureate  math_edu_mths_brevet_colleges
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_mths_baccalaureate  math_edu_grade_cess  math_edu_mths_cess
Length:12570                 Length:12570         Length:12570
Class :character             Class :character     Class :character
Mode  :character             Mode  :character     Mode  :character




math_edu_take_enem math_edu_grade_enem math_edu_year_emen math_edu_no_years
```

```
Length:12570       Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character   Class :character
Mode  :character   Mode  :character   Mode  :character   Mode  :character



math_edu_grade_liseye math_edu_grade_universiteye math_edu_mths_liseye
Length:12570          Length:12570                Length:12570
Class :character      Class :character            Class :character
Mode  :character      Mode  :character            Mode  :character



math_edu_mths_universiteye math_edu_grade_lai math_edu_grade_kitsas
Length:12570               Length:12570       Length:12570
Class :character           Class :character   Class :character
Mode  :character           Mode  :character   Mode  :character



math_edu_grade_uldine math_edu_mths_lai  math_edu_mths_kitsas
Length:12570          Length:12570       Length:12570
Class :character      Class :character   Class :character
Mode  :character      Mode  :character   Mode  :character



math_edu_mths_uldine math_edu_grade_total math_edu_grade_erettsegi
Length:12570         Length:12570         Length:12570
Class :character     Class :character     Class :character
Mode  :character     Mode  :character     Mode  :character



math_edu_grade_emelt_szintu math_edu_mths_erettsegi math_edu_mths_emelt_szintu
Length:12570               Length:12570             Length:12570
Class :character           Class :character         Class :character
Mode  :character           Mode  :character         Mode  :character
```

```
math_edu_grade_zdravstvena  math_edu_mths_zdravstvena  math_edu_mths_gimnazija
Length:12570                Length:12570               Length:12570
Class :character            Class :character           Class :character
Mode  :character            Mode  :character           Mode  :character




math_edu_grade_srednjoj_skoli math_edu_grade_fakultativni
Length:12570                Length:12570
Class :character            Class :character
Mode  :character            Mode  :character




math_edu_grade_obavezni  math_edu_mths_srednjoj_skoli
Length:12570             Length:12570
Class :character         Class :character
Mode  :character         Mode  :character




math_edu_mths_fakultativni math_edu_mths_obavezni  math_edu_grade_podstawowy
Length:12570               Length:12570             Length:12570
Class :character           Class :character         Class :character
Mode  :character           Mode  :character         Mode  :character




math_edu_grade_rozszerzony math_edu_mths_podstawowy math_edu_mths_rozszerzony
Length:12570               Length:12570             Length:12570
Class :character           Class :character         Class :character
Mode  :character           Mode  :character         Mode  :character
```

```
math_edu_grade_capacitate math_edu_grade_bacalaureat math_edu_mths_capacitate
Length:12570               Length:12570               Length:12570
Class :character           Class :character           Class :character
Mode  :character           Mode  :character           Mode  :character




math_edu_mths_bacalaureat math_edu_grade_maturita
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




math_edu_grade_strednej_skole math_edu_mths_maturita
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_mths_strednej_skole math_edu_grade_lower math_edu_grade_general
Length:12570                 Length:12570          Length:12570
Class :character             Class :character      Class :character
Mode  :character             Mode  :character      Mode  :character




math_edu_mths_lower math_edu_mths_general math_edu_units_matriculation
Length:12570        Length:12570          Length:12570
Class :character    Class :character      Class :character
Mode  :character    Mode  :character      Mode  :character




math_edu_grade_matriculation math_edu_yrsmths_matriculation
Length:12570                 Length:12570
```

```
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_psychometric math_edu_grade_psychometric
Length:12570          Length:12570
Class :character      Class :character
Mode  :character      Mode  :character




math_edu_yrsmths_psychometric math_edu_grade_secondary
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




math_edu_grade_undergrad math_edu_mths_secondary math_edu_mths_undergrad
Length:12570             Length:12570            Length:12570
Class :character         Class :character        Class :character
Mode  :character         Mode  :character        Mode  :character




math_edu_grade_gymnasio math_edu_grade_lykeion math_edu_mths_gymnasio
Length:12570            Length:12570           Length:12570
Class :character        Class :character       Class :character
Mode  :character        Mode  :character       Mode  :character




math_edu_mths_lykeion math_edu_grade_sta math_edu_grade_external
Length:12570          Length:12570       Length:12570
Class :character      Class :character   Class :character
Mode  :character      Mode  :character   Mode  :character
```

```
math_edu_mths_sta    math_edu_mths_external  stats_edu_first_module
Length:12570         Length:12570            Length:12570
Class :character     Class :character        Class :character
Mode  :character     Mode  :character        Mode  :character




stats_edu_module_1  stats_edu_module_2  stats_edu_module_3  stats_edu_module_4
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character    Mode  :character




stats_edu_module_5  stats_edu_module_6  stats_edu_module_specify
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




stats_edu_grade    stats_edu_grade_1   stats_edu_grade_2   stats_edu_grade_3
Length:12570       Length:12570        Length:12570        Length:12570
Class :character   Class :character    Class :character    Class :character
Mode  :character   Mode  :character    Mode  :character    Mode  :character




stats_edu_grade_4  stats_edu_grade_5   stats_edu_grade_6
Length:12570       Length:12570        Length:12570
Class :character   Class :character    Class :character
Mode  :character   Mode  :character    Mode  :character
```

```
stats_edu_grade_baskent_1 stats_edu_grade_baskent_2 stats_edu_grade_edited
Length:12570              Length:12570              Length:12570
Class :character          Class :character          Class :character
Mode  :character          Mode  :character          Mode  :character




stats_edu_grade_1_edited stats_edu_grade_2_edited stats_edu_grade_3_edited
Length:12570             Length:12570             Length:12570
Class :character         Class :character         Class :character
Mode  :character         Mode  :character         Mode  :character




stats_edu_grade_4_edited stats_edu_grade_5_edited stats_edu_grade_6_edited
Length:12570             Length:12570             Length:12570
Class :character         Class :character         Class :character
Mode  :character         Mode  :character         Mode  :character




stats_edu_grade_data_type all_stats_modules  is_university
Length:12570              Length:12570       Length:12570
Class :character          Class :character   Class :character
Mode  :character          Mode  :character   Mode  :character




is_stats_module    average_overall_grade is_stats_module_code
Length:12570       Length:12570          Length:12570
Class :character   Class :character      Class :character
Mode  :character   Mode  :character      Mode  :character




mod_start_date     mod_end_date       software_excel     software_jamovi
Length:12570       Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character   Class :character
```

```
Mode   :character    Mode   :character    Mode   :character    Mode   :character



software_jasp       software_r          software_sas        software_spss_amos
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode   :character   Mode   :character   Mode   :character   Mode   :character



software_spss_stats software_none       software_other      software_specify
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode   :character   Mode   :character   Mode   :character   Mode   :character



freq_or_bayes       topic_covariates    topic_algebra       topic_anova
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode   :character   Mode   :character   Mode   :character   Mode   :character



topic_bayes_factors topic_bayes_theorem topic_bootstrapping topic_calculus
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode   :character   Mode   :character   Mode   :character   Mode   :character



topic_casual_inference topic_causality    topic_conf_ints
Length:12570           Length:12570       Length:12570
Class :character       Class :character   Class :character
Mode   :character      Mode   :character  Mode   :character
```

```
     topic_correlation  topic_data_wrangling topic_data_vis     topic_distributions
 Length:12570           Length:12570         Length:12570       Length:12570
 Class :character        Class :character     Class :character   Class :character
 Mode  :character        Mode  :character     Mode  :character   Mode  :character




     topic_descriptive_stats topic_effect_sizes topic_exp_design
 Length:12570                Length:12570       Length:12570
 Class :character            Class :character   Class :character
 Mode  :character            Mode  :character   Mode  :character




     topic_factor_analysis topic_moderation   topic_linear_models
 Length:12570              Length:12570       Length:12570
 Class :character          Class :character   Class :character
 Mode  :character          Mode  :character   Mode  :character




     topic_logistic_reg topic_mediation    topic_meta_analysis topic_assumptions
 Length:12570           Length:12570       Mode:logical         Length:12570
 Class :character        Class :character   NA's:12570           Class :character
 Mode  :character        Mode  :character                        Mode  :character




     topic_multi_comparisons topic_multi_regression topic_non_para
 Length:12570                Length:12570           Length:12570
 Class :character            Class :character       Class :character
 Mode  :character            Mode  :character       Mode  :character




  topic_nhst          topic_ols          topic_open_science topic_philosophy
```

```
Length:12570      Length:12570      Length:12570      Length:12570
Class :character  Class :character  Class :character  Class :character
Mode  :character  Mode  :character  Mode  :character  Mode  :character




 topic_probability  topic_psychometrics  topic_qual        topic_reliability
Length:12570      Length:12570       Length:12570       Length:12570
Class :character  Class :character   Class :character   Class :character
Mode  :character  Mode  :character   Mode  :character   Mode  :character




 topic_regression  topic_rep_crisis  topic_report_writing topic_robust_tests
Length:12570      Length:12570      Length:12570        Length:12570
Class :character  Class :character  Class :character    Class :character
Mode  :character  Mode  :character  Mode  :character    Mode  :character




 topic_power       topic_software    topic_ttest       topic_other_a
Length:12570      Length:12570      Length:12570      Length:12570
Class :character  Class :character  Class :character  Class :character
Mode  :character  Mode  :character  Mode  :character  Mode  :character




 topic_other_b     topic_other_c     topic_other_d     topic_specify_a
Length:12570      Length:12570      Length:12570      Length:12570
Class :character  Class :character  Class :character  Class :character
Mode  :character  Mode  :character  Mode  :character  Mode  :character




 topic_specify_b   topic_specify_c   topic_specify_d   instructor_type
Length:12570      Length:12570      Length:12570      Length:12570
Class :character  Class :character  Class :character  Class :character
Mode  :character  Mode  :character  Mode  :character  Mode  :character
```

```
instructor_type_main_specify instructor_type_other_specify in_person_percent
Length:12570                 Length:12570                  Min.   :  0.00
Class :character             Class :character              1st Qu.: 10.00
Mode  :character             Mode  :character              Median : 40.00
                                                           Mean   : 43.71
                                                           3rd Qu.: 75.00
                                                           Max.   :100.00
                                                           NA's   :9163
in_person_reduction teaching_mode_lectures teaching_mode_practicals
Length:12570        Length:12570           Length:12570
Class :character    Class :character       Class :character
Mode  :character    Mode  :character       Mode  :character




teaching_mode_seminars teaching_mode_other_a teaching_mode_other_b
Length:12570           Length:12570          Length:12570
Class :character       Class :character      Class :character
Mode  :character       Mode  :character      Mode  :character




teaching_mode_specify_a teaching_mode_specify_b hrs_pw_lectures
Length:12570            Length:12570            Length:12570
Class :character        Class :character        Class :character
Mode  :character        Mode  :character        Mode  :character




hrs_pw_practicals  hrs_pw_seminars   hrs_pw_other_a    hrs_pw_other_b
Length:12570       Length:12570      Length:12570      Min.   :0.750
Class :character   Class :character  Class :character  1st Qu.:1.000
Mode  :character   Mode  :character  Mode  :character   Median :1.000
                                                       Mean   :0.967
                                                       3rd Qu.:1.000
                                                       Max.   :1.000
```

```
                                                      NA's   :12509
in_person_lectures in_person_lectures_specify sync_lectures
Length:12570        Length:12570            Length:12570
Class :character    Class :character        Class :character
Mode  :character    Mode  :character        Mode  :character




sync_lectures_specify in_person_practicals in_person_practicals_specify
Length:12570          Length:12570         Length:12570
Class :character      Class :character     Class :character
Mode  :character      Mode  :character     Mode  :character




in_person_seminars in_person_seminars_specify in_person_other_a
Length:12570        Mode:logical              Length:12570
Class :character    NA's:12570                Class :character
Mode  :character                              Mode  :character




in_person_other_a_specify in_person_other_b  in_person_other_b_specify
Length:12570              Length:12570        Length:12570
Class :character         Class :character     Class :character
Mode  :character         Mode  :character     Mode  :character




assess_type_final_exam assess_type_take_away_paper assess_type_coursework
Length:12570           Length:12570               Length:12570
Class :character       Class :character           Class :character
Mode  :character       Mode  :character           Mode  :character




assess_type_regular_testing assess_type_attendance assess_type_other_a
Length:12570                Length:12570           Length:12570
```

```
Class :character          Class :character          Class :character
Mode  :character          Mode  :character          Mode  :character




assess_type_other_b assess_type_other_c assess_type_other_a_specify
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




assess_type_other_b_specify assess_type_other_c_specify
Length:12570                Length:12570
Class :character            Class :character
Mode  :character            Mode  :character




assess_percent_final_exam assess_percent_take_away_paper
Min.   : 25.00            Min.   :  0.00
1st Qu.: 30.00            1st Qu.: 16.00
Median : 50.00            Median : 40.00
Mean   : 55.93           Mean   : 33.05
3rd Qu.: 75.00            3rd Qu.: 40.00
Max.   :100.00           Max.   :100.00
NA's   :9540             NA's   :11976
assess_percent_coursework assess_percent_regular_testing
Min.   :  0.00           Min.   :  0.00
1st Qu.: 30.00           1st Qu.:20.00
Median : 40.00           Median :35.00
Mean   : 45.11           Mean   :34.62
3rd Qu.: 50.00           3rd Qu.:50.00
Max.   :100.00           Max.   :70.00
NA's   :9322             NA's   :9584
assess_percent_attendance assess_percent_other_a assess_percent_other_b
Min.   : 0.000           Min.   :  0.00         Min.   : 2.500
1st Qu.: 0.000           1st Qu.: 5.00          1st Qu.: 2.500
Median : 0.000           Median :10.00          Median : 5.000
Mean   : 2.853          Mean   :20.94          Mean   : 8.114
```

```
3rd Qu.: 5.000          3rd Qu.:25.00          3rd Qu.:10.000
Max.   :25.000          Max.   :70.00          Max.   :30.000
NA's   :11932           NA's   :11331          NA's   :12289
assess_percent_other_c  no_of_exams    length_exam_single date_exam_single
Min.   : 0.00           Min.   : 1.0   Min.   : 6.00      Length:12570
1st Qu.:20.00           1st Qu.: 1.0   1st Qu.: 75.00     Class :character
Median :27.50           Median : 1.0   Median :100.00     Mode  :character
Mean   :23.34           Mean   : 14.2  Mean   : 95.18
3rd Qu.:27.50           3rd Qu.: 1.0   3rd Qu.:120.00
Max.   :27.50           Max.   :400.0  Max.   :180.00
NA's   :12404           NA's   :9610   NA's   :10226
in_person_exam_single in_person_exam_single_specify scale_exam_single
Length:12570          Mode:logical                  Length:12570
Class :character      NA's:12570                    Class :character
Mode  :character                                    Mode  :character




scale_exam_single_yes_specify scale_exam_single_no_specify length_exam_multi1
Length:12570                  Length:12570                 Min.   : 45.0
Class :character              Class :character             1st Qu.: 90.0
Mode  :character              Mode  :character             Median : 90.0
                                                           Mean   :102.4
                                                           3rd Qu.:120.0
                                                           Max.   :150.0
                                                           NA's   :12064
length_exam_multi2 length_exam_multi3 length_exam_multi4 date_exam_multi1
Min.   : 15.00     Min.   : 90.00     Min.   : 90.00     Length:12570
1st Qu.: 30.00     1st Qu.: 90.00     1st Qu.: 90.00     Class :character
Median : 90.00     Median : 90.00     Median : 90.00     Mode  :character
Mean   : 75.68     Mean   : 99.94     Mean   : 99.94
3rd Qu.:100.00     3rd Qu.:120.00     3rd Qu.:120.00
Max.   :120.00     Max.   :120.00     Max.   :120.00
NA's   :12160      NA's   :12398      NA's   :12398
date_exam_multi2   date_exam_multi3   date_exam_multi4   in_person_exam_multi1
Length:12570       Length:12570       Length:12570       Length:12570
Class :character   Class :character   Class :character   Class :character
Mode  :character   Mode  :character   Mode  :character   Mode  :character
```

```
in_person_exam_multi2 in_person_exam_multi3 in_person_exam_multi4
Length:12570          Length:12570          Length:12570
Class :character       Class :character      Class :character
Mode  :character       Mode  :character      Mode  :character




scale_exam_multi1  scale_exam_multi1_yes_specify scale_exam_multi1_no_specify
Length:12570       Length:12570                  Length:12570
Class :character   Class :character              Class :character
Mode  :character   Mode  :character              Mode  :character




scale_exam_multi2  scale_exam_multi2_yes_specify scale_exam_multi2_no_specify
Length:12570       Length:12570                  Length:12570
Class :character   Class :character              Class :character
Mode  :character   Mode  :character              Mode  :character




scale_exam_multi3  scale_exam_multi3_yes_specify scale_exam_multi3_no_specify
Length:12570       Length:12570                  Length:12570
Class :character   Class :character              Class :character
Mode  :character   Mode  :character              Mode  :character




scale_exam_multi4  scale_exam_multi4_yes_specify scale_exam_multi4_no_specify
Length:12570       Length:12570                  Length:12570
Class :character   Class :character              Class :character
Mode  :character   Mode  :character              Mode  :character




no_types_reg_tests freq_reg_tests_single freq_reg_tests_single_specify
Min.   : 1.000     Length:12570          Length:12570
1st Qu.: 1.000     Class :character      Class :character
```

```
Median : 2.000     Mode  :character     Mode  :character
Mean   : 2.872
3rd Qu.: 3.000
Max.   :17.000
NA's   :9654
format_reg_tests_single format_reg_tests_single_cwk_specify
Length:12570            Length:12570
Class :character        Class :character
Mode  :character        Mode  :character




timed_reg_tests_single time_reg_tests_single all_marks_reg_tests_single
Length:12570            Length:12570          Length:12570
Class :character        Class :character      Class :character
Mode  :character        Mode  :character      Mode  :character




all_marks_reg_tests_single_no_specify all_marks_reg_tests_single_other_specify
Length:12570                          Mode:logical
Class :character                      NA's:12570
Mode  :character




scale_reg_tests_single scale_reg_tests_single_yes_specify
Length:12570           Length:12570
Class :character       Class :character
Mode  :character       Mode  :character




scale_reg_tests_single_no_specify format_reg_tests_multi1
Length:12570                      Length:12570
Class :character                  Class :character
Mode  :character                  Mode  :character
```

```
format_reg_tests_multi1_cwk_specify freq_reg_tests_multi1
Length:12570                        Length:12570
Class :character                    Class :character
Mode  :character                    Mode  :character



freq_reg_tests_multi1_specify timed_reg_tests_multi1 time_reg_tests_multi1
Length:12570                  Length:12570           Length:12570
Class :character              Class :character       Class :character
Mode  :character              Mode  :character       Mode  :character



all_marks_reg_tests_multi1 all_marks_reg_tests_multi1_no_specify
Length:12570               Length:12570
Class :character           Class :character
Mode  :character           Mode  :character



format_reg_tests_multi2 format_reg_tests_multi2_cwk_specify
Length:12570            Length:12570
Class :character        Class :character
Mode  :character        Mode  :character



freq_reg_tests_multi2 freq_reg_tests_multi2_specify timed_reg_tests_multi2
Length:12570          Length:12570                  Length:12570
Class :character      Class :character              Class :character
Mode  :character      Mode  :character              Mode  :character



time_reg_tests_multi2 all_marks_reg_tests_multi2
```

```
Length:12570          Length:12570
Class :character      Class :character
Mode  :character      Mode  :character




all_marks_reg_tests_multi2_no_specify all_marks_reg_tests_multi2_other_specify
Length:12570                          Length:12570
Class :character                      Class :character
Mode  :character                      Mode  :character




  no_of_taps      time_taps_single    start_date_tap_single end_date_tap_single
Min.   :1.000   Length:12570        Length:12570          Length:12570
1st Qu.:1.000   Class :character    Class :character      Class :character
Median :1.000   Mode  :character    Mode  :character      Mode  :character
Mean   :1.483
3rd Qu.:1.000
Max.   :4.000
NA's   :12046
scale_tap_single   scale_tap_single_yes_specify scale_tap_single_no_specify
Length:12570       Length:12570                 Length:12570
Class :character   Class :character             Class :character
Mode  :character   Mode  :character             Mode  :character




time_taps_multi1   time_taps_multi2    time_taps_multi3    time_taps_multi4
Length:12570       Length:12570        Length:12570        Length:12570
Class :character   Class :character    Class :character    Class :character
Mode  :character   Mode  :character    Mode  :character    Mode  :character




start_date_tap_multi1 start_date_tap_multi2 start_date_tap_multi3
Length:12570          Length:12570          Length:12570
Class :character      Class :character      Class :character
Mode  :character      Mode  :character      Mode  :character
```

```
start_date_tap_multi4 end_date_tap_multi1 end_date_tap_multi2
Length:12570          Length:12570        Length:12570
Class :character      Class :character    Class :character
Mode  :character      Mode  :character    Mode  :character




end_date_tap_multi3 end_date_tap_multi4 scale_tap_multi1
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




scale_tap_multi1_yes_specify scale_tap_multi2   scale_tap_multi2_yes_specify
Length:12570                 Length:12570       Length:12570
Class :character             Class :character   Class :character
Mode  :character             Mode  :character   Mode  :character




scale_tap_multi3   scale_tap_multi3_yes_specify scale_tap_multi4
Length:12570       Length:12570                 Length:12570
Class :character   Class :character             Class :character
Mode  :character   Mode  :character             Mode  :character




scale_tap_multi4_yes_specify   no_of_cwk      format_cwk_single
Length:12570                 Min.   : 1.000   Length:12570
Class :character             1st Qu.: 1.000   Class :character
Mode  :character             Median : 2.000   Mode  :character
                             Mean   : 3.791
                             3rd Qu.: 3.000
                             Max.   :39.000
```

```
                            NA's   :9400
format_cwk_single_report_specify format_cwk_single_other_specify
Length:12570                    Length:12570
Class :character                Class :character
Mode  :character                Mode  :character




deadline_cwk_single scale_cwk_single   scale_cwk_single_yes_specify
Length:12570        Length:12570       Length:12570
Class :character    Class :character   Class :character
Mode  :character    Mode  :character   Mode  :character




scale_cwk_single_no_specify format_cwk_multi1_full_report
Length:12570                Length:12570
Class :character            Class :character
Mode  :character            Mode  :character




format_cwk_multi2_full_report format_cwk_multi3_full_report
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




format_cwk_multi4_full_report format_cwk_multi5_full_report
Length:12570                  Length:12570
Class :character              Class :character
Mode  :character              Mode  :character




format_cwk_multi6_full_report format_cwk_multi7_full_report
Length:12570                  Length:12570
```

```
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi8_full_report format_cwk_multi9_full_report
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi1_partial_report format_cwk_multi2_partial_report
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi3_partial_report format_cwk_multi4_partial_report
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi5_partial_report format_cwk_multi10_partial_report
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi1_proposal format_cwk_multi2_proposal
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character
```

```
format_cwk_multi8_proposal  format_cwk_multi1_other1  format_cwk_multi2_other1
Mode:logical                Length:12570              Length:12570
NA's:12570                  Class :character          Class :character
                            Mode  :character          Mode  :character




format_cwk_multi3_other1  format_cwk_multi4_other1  format_cwk_multi5_other1
Length:12570              Length:12570              Length:12570
Class :character          Class :character          Class :character
Mode  :character          Mode  :character          Mode  :character




format_cwk_multi_other1_specify  format_cwk_multi1_other2
Length:12570                     Length:12570
Class :character                 Class :character
Mode  :character                 Mode  :character




format_cwk_multi2_other2  format_cwk_multi3_other2
Length:12570              Length:12570
Class :character          Class :character
Mode  :character          Mode  :character




format_cwk_multi_other2_specify  format_cwk_multi6_other3
Length:12570                     Mode:logical
Class :character                 NA's:12570
Mode  :character
```

```
format_cwk_multi_other3_specify format_cwk_multi7_other4
Mode:logical                     Mode:logical
NA's:12570                       NA's:12570




format_cwk_multi_other4_specify format_cwk_multi9_other5
Mode:logical                     Mode:logical
NA's:12570                       NA's:12570




format_cwk_multi_other5_specify format_cwk_multi10_other6
Mode:logical                     Mode:logical
NA's:12570                       NA's:12570




format_cwk_multi_other6_specify deadline_cwk_multi1 deadline_cwk_multi2
Mode:logical                     Length:12570        Length:12570
NA's:12570                       Class :character    Class :character
                                 Mode  :character    Mode  :character




deadline_cwk_multi3 deadline_cwk_multi4 deadline_cwk_multi5
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




deadline_cwk_multi6 deadline_cwk_multi7 deadline_cwk_multi8
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
```

```
Mode  :character    Mode  :character    Mode  :character




deadline_cwk_multi9 deadline_cwk_multi10 scale_cwk_multi1
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




scale_cwk_multi1_yes_specify scale_cwk_multi1_no_specify scale_cwk_multi2
Length:12570                 Length:12570                Length:12570
Class :character             Class :character            Class :character
Mode  :character             Mode  :character            Mode  :character




scale_cwk_multi2_yes_specify scale_cwk_multi2_no_specify scale_cwk_multi3
Length:12570                 Length:12570                Length:12570
Class :character             Class :character            Class :character
Mode  :character             Mode  :character            Mode  :character




scale_cwk_multi3_yes_specify scale_cwk_multi3_no_specify scale_cwk_multi4
Length:12570                 Length:12570                Length:12570
Class :character             Class :character            Class :character
Mode  :character             Mode  :character            Mode  :character




scale_cwk_multi4_yes_specify scale_cwk_multi4_no_specify scale_cwk_multi5
Length:12570                 Length:12570                Length:12570
Class :character             Class :character            Class :character
Mode  :character             Mode  :character            Mode  :character
```

```
scale_cwk_multi5_yes_specify  scale_cwk_multi5_no_specify  scale_cwk_multi6
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi6_yes_specify  scale_cwk_multi6_no_specify  scale_cwk_multi7
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi7_yes_specify  scale_cwk_multi7_no_specify  scale_cwk_multi8
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi8_yes_specify  scale_cwk_multi8_no_specify  scale_cwk_multi9
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi9_yes_specify  scale_cwk_multi9_no_specify  scale_cwk_multi10
Length:12570                  Length:12570                 Length:12570
Class :character              Class :character             Class :character
Mode  :character              Mode  :character             Mode  :character




scale_cwk_multi10_no_specify  tasks_other1      date_other1
```

```
Length:12570                   Length:12570        Length:12570
Class :character               Class :character    Class :character
Mode  :character               Mode  :character    Mode  :character




scale_other1        scale_other1_yes_specify scale_other1_no_specify
Length:12570        Length:12570             Length:12570
Class :character    Class :character         Class :character
Mode  :character    Mode  :character         Mode  :character




info_other1         tasks_other2        date_other2         scale_other2
Length:12570        Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character    Mode  :character




scale_other2_yes_specify scale_other2_no_specify info_other2
Length:12570             Mode:logical            Length:12570
Class :character         NA's:12570              Class :character
Mode  :character                                 Mode  :character




tasks_other3        date_other3         scale_other3
Length:12570        Length:12570        Length:12570
Class :character    Class :character    Class :character
Mode  :character    Mode  :character    Mode  :character




scale_other3_yes_specify scale_other3_no_specify summative_instructor_written
Length:12570             Length:12570            Length:12570
Class :character         Class :character        Class :character
Mode  :character         Mode  :character        Mode  :character
```

```
summative_instructor_verbal summative_instructor_grade summative_peer_written
Length:12570                Length:12570                Mode:logical
Class :character            Class :character            NA's:12570
Mode  :character            Mode  :character


summative_peer_verbal summative_peer_grade summative_none
Length:12570          Length:12570         Length:12570
Class :character      Class :character     Class :character
Mode  :character      Mode  :character     Mode  :character


additional_info    grade_module_name      grade            grade_low
Length:12570       Length:12570        Length:12570      Length:12570
Class :character   Class :character    Class :character  Class :character
Mode  :character   Mode  :character    Mode  :character  Mode  :character


 grade_high        grade_category_notes
Length:12570       Length:12570
Class :character   Class :character
Mode  :character   Mode  :character
```