

Exercise 1

Number of students

```
> nrow(stu)
[1] 340823
```

Number of schools

```
> length(unique(as.vector(as.matrix(schoolcode))))
[1] 641
```

Number of programs

```
> length(unique(as.vector(as.matrix(program))))
[1] 33
```

Number of choices

```
> length(unique(as.vector(as.matrix(choice))))
[1] 3086
```

Missing test score

```
> table(missing)
missing
FALSE  TRUE
160936 179887
```

Apply to the same school

```
> table(same)
same
      1      2      3      4      5      6
195    2019    9233   34067   88154  207155
```

Apply to less than 6 choices

```
> table(is.na(stu$schoolcode6))
FALSE  TRUE
323735 17088
```