Lucas Faijdherbe(2594812) & Ruben van der Ham(2592271) – CS40

**Assignment 1**

**Exercise 1.1**

10. Sampling method: Voluntary response. This is a flawed sampling method, since respondents can decide themselves if they want to respond, which can lead to a ‘biased sample.

12. Sampling method: Randomized sample. This can be considered a sound approach, since everybody has an equal chance of getting picked. The group has a substantial size of over a 1000 respondents, which also helps in making sure there will really be different kinds of people responding.

26. Everybody can respond to this poll. This means that not only students that follow a college major can respond, but also people that already have a job, etc. Now, the number says absolutely nothing. It might be that all college major students responded that their major prepared them for their chosen carreers (so, 41%), but that the other 59% of the respondents did not even follow a college major, leading to a flawed conclusion. It would be better to only poll students.

**Exercise 1.2**

***In Exercises 21–28, determine which of the four levels of measurement (nominal, ordinal, interval, ratio) is most appropriate.*21.** Colors of M&Ms (red, orange, yellow, brown, blue, green) listed in Data Set 20 in Appendix B **22.** Depths (km) of earthquakes listed in Data Set 16 of Appendix B

***In Exercises 29–32, identify the level of measurement of the data. Also, explain what is wrong with the given calculation.***

**32. World Series Champs** As of this writing, the New York Yankees were the last team to win the World Series, and the numbers of the starting lineup are 2, 18, 25, 13, 20, 55, 24, 33, and 53. The average (mean) of those numbers is 27.0.

**Exercise 1.3**

***In Exercises 5–8, determine whether the given description corresponds to an observational study or an experiment. In each case, give a brief explanation of your choice.***

**6. Clinical Trial** In a clinical trial of the cholesterol drug Lipitor, 188 subjects were given 20­mg doses of the drug, and 3.7% of them experienced nausea (based on data from Pfizer, Inc.).

***In Exercises 9–20, identify which of these types of sampling is used:* random, systematic, convenience, stratified, *or* cluster.**

**12. Ecology** When collecting data from different sample locations in a lake, a researcher uses the “line transect method” by stretching a rope across the lake and collecting samples at every interval of 5 meters.

**18. Exit Polls** On the day of the last presidential election, ABC News organized an exit poll in which specific polling stations were randomly selected and all voters were surveyed as they left the premises.

**Exercise 1.4**

**Exercise 1.5**

**Exercise 1.6**

**Exercise 1.7**