

Homework Solutions

Chapter 2 – Page 136

Exercise 63

- (a) (i) The total number of drivers selected will be

$$\begin{aligned} 0.02 \times 500 + 0.03 \times 1200 + 0.05 \times 18000 &= 10 + 36 + 900 \\ &= 946. \end{aligned}$$

- (ii) Stratified sampling. A simple random sample was taken from each stratum.
- (iii) Set the seed to 87, enter `randInt(1,500)`, and press ENTER 5 times. You should get 432, 232, 304, 412, and 372.
- (b) (i) Set the seed to 9, enter `randInt(1,20)`, and press ENTER once. You should get 15. So the first 5 members will be numbered 15, 35, 55, 75, and 95.
- (ii) Divide 20 into 500. It goes evenly with a quotient of 25, so there will be 25 complete blocks of 20 with nothing left over. Therefore, there will be 25 drivers from the *High* category included in the sample.