**Exercise 8.1**

Sample size of Diet B is n = 50

The average weight loss for people who undertook Diet B is 3.710 kg indicating that the diet is effective.

Because the standard deviation is 2.769 kg and the mean weight loss is greater than 1s, it indicates that a large proportion of people who did diet B had a positive result of weight loss, which means the diet was effective. However, it was not as effective a diet A which has a greater mean weight loss and the greater difference between standard deviation and the mean.

**Exercise 8.2**

The median weight loss for Diet B is 3.745 indicating an effective diet. In comparison to the median of Diet A = 5.642, Diet A appears to be more effective as the median is greater.

The interquartile range for Diet B is 3.451. This indicates that a high proportion of dieters had a positive weight loss emphasising the effectiveness of Diet B. This is like the IQR of Diet A, which means both are effective. Considering the median, Diet A is overall more effective.

**Exercise 8.3**

In Area 2, there were 90 respondents. Of the 90 respondents, 21.1% preferred Brand A and 33.3% preferred Brand B, and the remaining 45.6% preferred another brand.

Other brands appear more popular in Area 1 than in Area 2, thus brand A and B are more popular in Area 2 as the share % of the brands combined are greater than in Area 1.