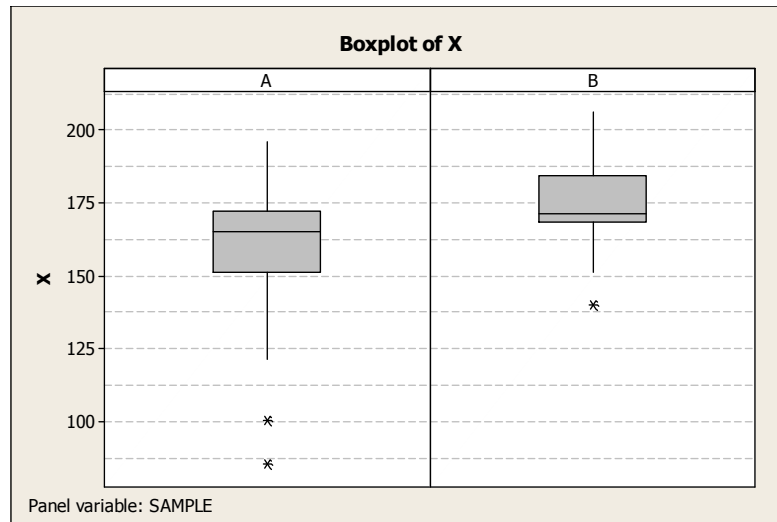


Exercise 2.126

a.



b. For Sample A, 85 and 100 are potential outliers. For Sample B, 140 is a potential outlier.

Exercise 2.128

a. In this case, our mean is given by $\bar{x} = 79$ and our sample standard deviation is given by $s = 23$. So, the z-score for a measurement of 175 will be computed as follows:

$$z = \frac{175 - \bar{x}}{s} = \frac{175 - 79}{23} \approx 4.17$$

- b. Since the measurement of 175 has a z-score of 4.17 I would consider it an outlier because its z-score is greater than 3. That is, in this example a measurement of 175 would be more than three standard deviations from the mean.
- c. This outlier may have occurred because the measurement is incorrect or this dentist's patients are very different from those of the other dentists in the sample. Of course, it could simply be the case that this dentist just always uses more local anesthetics than would ordinarily be considered to be sufficient.