

1. a. Minimum: 86 , Q_1 : 116 , Median: 124 , Q_3 : 136 , Maximum: 166
b. Only the median would be affected. It would be 121 days instead of 124 days.

2. a. Minimum: 0 , Q_1 : 1 , Median: 8 , Q_3 : 10 , Maximum: 12

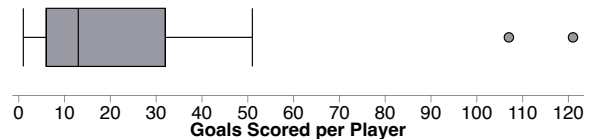
b.



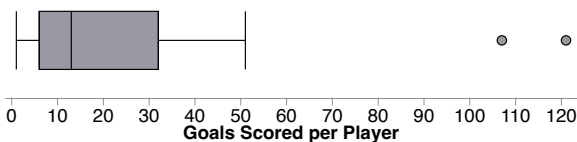
- c. 1) A dotplot shows every individual value in the data set, which cannot be determined with the boxplot.
2) With a dotplot, the gap between 3 minutes and 7 minutes is visible. The gap is not visible with the boxplot.

3. a. Both 107 and 121 are high outliers. The low cutoff is $6 - 1.5(32 - 6) = -33$ and the high cutoff is $32 + 1.5(32 - 6) = 71$.
b. Both 107 and 121 are high outliers. The low cutoff is $27 - 2(35.12) = -43.24$ and the high cutoff is $27 + 2(35.12) = 97.24$.

- c. Answers may vary. The shape of the distribution is skewed to the right because the mean of 27 goals is greater than the median of 13 goals. In addition, the 2 high outliers of 107 goals and 121 goals will skew the data towards the high values.



d.



4.
 - a. A teacher with 11 years teaching experience has more teaching experience than about 50% of the other teachers.
 - b. About 75%
 - c. 74 teachers

5.
 - a. It is not possible to calculate the median because we do not know the exact values of each of the 216 values in the data set. We can determine the interval that contains the median, but not the exact value.
 - b. The first quartile is in the 40% up to 50% interval.

6. The distributions of the number of calories for full-sized sandwiches and the number of calories for full-sized salads both appear to be roughly symmetric. The median number of calories is much greater for the sandwiches (about 830) than the salads (about 475). The IQR of the sandwich distribution (about 340) is also greater than the IQR of the salad distribution (about 180). Neither distribution has any outliers.

7. C

8. B