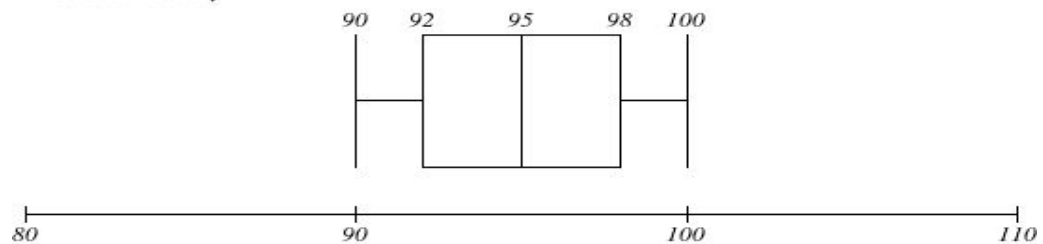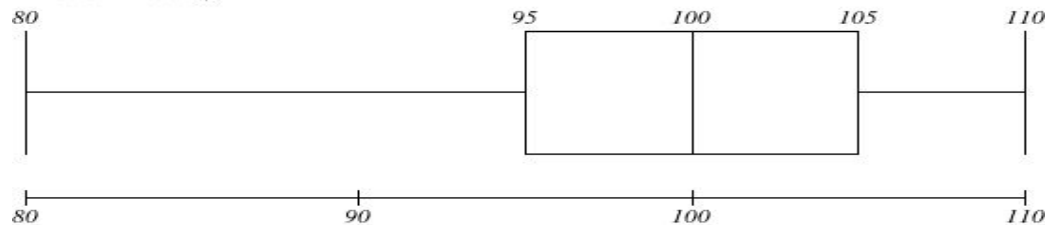1. The longevity of two types of batteries were compared.
    a. Brand A had a mean longevity of 101 hours. Brand B had a mean longevity of 105 hours. What can you conclude about Brand A and Brand B based on this information?

    b. Brand C had a mean of 99 hours and a median of 125 hours. What can you conclude about Brand C based on this information?

    c. Brand D had a standard deviation of 11.1 hours. Brand E had a standard deviation of 5.2 hours. What can you conclude about brand D and Brand E based on this information?

    d. Brand X has a mean of 100 hours and a standard deviation of 9 hours. Brand Y has a mean of 105 hours and a standard deviation of 20 hours. Based on this information, which brand would you be more likely to buy? Justify your answer.

2. The boxplots below show two additional battery brands, W and Z. Which battery brand would you buy? Justify your conclusion using the information shown on the boxplots.

*Brand W Battery*

| 90 | 92 | | 95 | | 98 | 100 |

| 80 | 90 | 100 | 110 |

*Brand Z Battery*

| 80 | | | 95 | 100 | 105 | 110 |

| 80 | 90 | 100 | 110 |

3.      Fiona's group and Natalie's group compete in a dart throwing competition

Fiona's group had a mean distance from the bullseye of 25.3 cm, a median distance from the target of 30 cm and a standard deviation of 10 cm.

Natalie's group had a mean distance from the bullseye of 32 cm, a median distance from the target of 33.1 cm and a standard deviation of 3 cm.

        What conclusions can you draw about how Natalie's group and Fiona's group did in the competition?

4.      During the current basketball season, the Freshmen coach has been emphasizing passing and recognizing players with a high number of assists during games.

In games this season, Matthew has a mean of 5.3 assists, a median of 5.5 assists and a standard deviation of 1.3. Eli has a mean of 6 assists, a median of 3 assists and a standard deviation of 3.9.

        What conclusions can you draw about how Matthew and Eli compare in the assists they have during games?

5.      The administration at Cleveland High School wants help understanding how students do in different subjects.

This semester, grade point for all the math classes had a mean of 3.11, a median of 3.15 and a standard deviation of 0.9. Grade point for all English classes had a mean of 3.4, a median of 3.33 and a standard deviation of 0.3.

        What conclusions can you draw about how students do in math versus English at Cleveland?