Discussion Week 10 Answers

13.

a. (608.58, 699.74)

b. 188.24

33.

a. The boxplot indicates a very slight positive skew, with no outliers. The data appears to center near 438.

b. (430.51, 446.08). Since 440 is within the interval, 440 is a plausible value for the true mean. 450, however, is not, since it lies outside the interval.

Example 8.6

1. Parameter of interest: μ = true average activation temperature.
2. H_0: $\mu = 130$ (null value = $\mu_0 = 130$).
3. H_a: $\mu \neq 130$ (a departure from the claimed value in either direction is of concern).
4. Test statistic value:

$$z = \frac{\overline{x} - \mu_0}{\sigma/\sqrt{n}} = \frac{\overline{x} - 130}{1.5/\sqrt{n}}$$

5. $z = 2.16$
6. P-value =.0308
7. H_0 cannot be rejected at significance level .01.