Answer Key pg 424

1. 2.898, 1.706

2. 95 out of 100 confidence intervals will include the mean. The five confidence intervals that don't include the mean are due to error (α).

3. The percentage of the time that the actual population mean (μ) or the population proportion (p) will lie within the boundaries of the confidence interval.

4. 10%

5. 0.0681, The t-distribution is a collection of probability distribution that are bell shaped.

8. $51.5 < \mu < 58.1$

   $52.3 < \mu < 57.3$, The width decreases as n increases.

   $49.5 < \mu < 60.1$, The width increases as the confidence level increases

10. Large sample size because data is slightly skewed left, $82.6 < \mu < 93.2$, 231

14. $\bar{x} = 147.3$, s = 28.8

    Yes, Normal with not outliers

    $129.0 < \mu < 165.6$

15. $\hat{p} = \dfrac{58}{678} = 0.086$, $0.065 < p < 0.107$, 336 people, 1068 people