

1.
 - a. 0.6335
 - b. 0.0795
 - c. 19 students

2.
 - a. No, the range of plausible values for p as given by the confidence interval are $(0.25 - 0.134, 0.25 + 0.134)$ or $(0.116, 0.384)$ and 0.42 is not contained within the interval.
 - b. Yes, the range of plausible values for p as given by the confidence interval are $(0.116, 0.384)$ and 0.19 is within this range.
 - c. Yes, the range of plausible values for p always includes the point estimate, $\hat{p}$, so 0.25 is a plausible value for p .

3.
 - a. Population: all adults aged 18 to 29, Sample: 200 randomly selected adults aged 18 to 29, Parameter: p = true proportion of all adults aged 18 to 29 who are very satisfied with their job, Statistic: $\hat{p} = 0.44$.
 - b. $(0.372, 0.508)$
 - c. We are 95% confident that the interval from 0.372 to 0.508 captures the true proportion of all adults aged 18 to 29 who are very satisfied with their job.
 - d. No, this claim is not supported. The confidence interval $(0.372, 0.508)$ includes values above 0.5, so we cannot conclude that the population proportion is less than half.

4.
 - a. Gerard is most sure of his initial guess because his margin of error (buffer) is the smallest.
 - b. Deidra, because her margin of error (buffer) is the largest.
 - c. More confident because her confidence interval is wider.
 - d. 39 years old

5.
 - a. No, 0.30 is not contained in the 95% confidence interval.
 - b. Yes, it is possible; we are not guaranteed that the 95% confidence interval will contain the true proportion.
 - c. 5%. By definition, 95% of the confidence intervals will contain the population proportion of bruised apples and 5% will not.

6. C

7. B