Module 15 prep

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7/30/2017

CONFIDENCE REGIONS

1. We hope that u is contained within the bounds of a confidence interval.
2. 95% of 95% of confidence regions will contain the parameter and is the same for 90% and 99%.
3. The odds you made an incorrect conclusion about the value of a 95% confidence region is 5% for 90% it is 10% and for 99% it is 1%
4. The level of confidence is calculated from a by 100(1-a).
5. The Ha is used by looking at if it is not equal, < or >.
6. The five steps are id the level of confidence, id the type of confidence regions, determine the scaling factor, compute the actual confidence regions and interpret the confidence region.
7. If the value in the null hypothesis is contained within a confidence region it will not be rejected.
8. The width of a confidence interval explains how precisely the parameter is estimated. The smaller confidence interval will be more accurate.
9. The decisions that can statisticians can make that will result in a narrower confidence interval is reducing the standard error or the scaling factor. Reducing the standard error is better.
10. The formula for computing a sample size is n =(Z∗σ)/( m.e)2. Population standard deviation must be known,
11. The R code used to find the scaling factor is the distrib function.
12. J

| **C** | **Interval** | **Lower Bound** | **Upper Bound** |
| --- | --- | --- | --- |
| 90% | 1.282 | -1.282 | 1.282 |
| 95% | 1.645 | -1.645 | 1.645 |
| 99% | 2.576 | -2.576 | 2.576 |