

Criterion for grading Hypothesis Tests and Confidence Intervals

A. For significance tests:

- State hypotheses using symbols and words
- Identify the type of statistical procedure you intend to use (e.g. t-test on difference in the means)
- **CHECK** assumptions or conditions for the chosen procedure (notice that you must not just state, but you should actually check them)
- Show the formula for the test statistic, show the substitution into the formula, give a final calculation
- Either compute a p-value or show the rejection region
- Make a decision about the null hypothesis based upon the p-value or the rejection region
- Connect your conclusion to the null hypothesis and write your conclusion in the context of the problem. Communication is key!!

B. For confidence intervals:

- State the type of procedure you wish to use (e.g. confidence interval on the difference in proportions)
- **CHECK** the assumptions for the chosen procedure
- Show the confidence interval formula
- Show the substitution of appropriate values into the formula
- Write down the final confidence interval
- Provide a narrative interpretation of the confidence interval in the *context* of the problem