Section 4.5 Task 2: Two-tailed test & Connections

# Facial Prototyping

A study in *Psychonomic Bulletin and Review* (Lea, Thomas, Lamkin, and Bell, 2007) presented evidence that “people use facial prototypes when they encounter different names.” Participants were given two faces and asked to identify which one was Tim and which one was Bob. The researchers wrote that their participants “overwhelmingly agreed” on which face belonged to Tim and which face belonged to Bob but did not provide the exact results of their study.

1. Perform a full hypothesis test to determine whether UNC students, in general, use facial prototypes when they encounter different names. Use a 5% significance level.

Let the parameter of interest be the probability that a student would assign the name Tim to the face on the left.

* Hypotheses:
* Observed Statistic:
* p-value:
* Decision:
* Conclusion:

1. Also compute and interpret a 95% confidence interval for the parameter of interest.
2. Using your confidence interval, what would be the decision for the test? Does this match your above result?
3. Answer this question only if appropriate (only if the test results were statistically significant): Does your confidence interval suggest that the results are practically important? Explain.