

## CSCI 4341

### Group Assignment 5

Group:

Game:

We continue our quest towards the complexity of a generalized version of the game. This week we want to start on the actual proof.

1. Identify what the decision question that you're asking about your game. It's probably along the lines of "For a given position of \_\_\_\_\_, does player one have a winning strategy?" i.e., can P1 guarantee a forced win?
2. Decide how your game generalizes- there may be many ways to do this, so decide on the one(s) that are the most natural, e.g., board size, number of types of pieces, etc.
2. Identify the type of constraint logic to reduce from (bounded/unbounded NCL, 2CL, etc.)
3. Create the gadgets corresponding to the necessary constraint logic vertices. This may be extremely difficult and unattainable within a week. If so, write up some of the attempts, why they didn't work, and why it is difficult to overcome their shortcomings (why is it hard to make the gadgets).
4. If needed, create a "wire" gadget that allows you to connect gadgets.

This should be done in a 2-3 page write-up. The goal is for these assignments to help each group toward the final report, thus each of these assignments will push you to look at another aspect of your game and give you the start to part of the write-up.