

MATH 321: IN-CLASS WORKSHEET 8
FRIDAY, MARCH 5TH

For today's activity, there's two open-ended questions about games I want you to consider. You can think on them in either order. If you finish one before the end of class, then you should work on the other, but if you don't have time for both that's okay.

- (1) Look at Exercise 7.13 from the textbook (page 90), which asks you to estimate the size of the game tree for tic-tac-toe. What are the best lower and upper bounds for the size of this tree you can determine? You may find it helpful to look at the partial picture of this game tree on page 84, or to read the discussion on page 83.
- (2) Read the section on page 88 of the textbook about what the author calls the Hypergame paradox. Can you explain the paradox? What does it establish about finite games and the Hypergame?
- (3) Submit on gradescope a short summary of your work. If you worked on (1), what were the best bounds you were able to calculate, and briefly explain how you got them. If you worked on (2), how did you explain the Hypergame paradox?