Part I (due at the beginning of class Monday, October 27, 2025)

read Chapter 2: Matrix Games: Dominance and Saddle Points in the textbook and answer the reading questions below. Note I said in class that the point that all the arrows were pointing to was an equilibrium point—it's actually called a *saddle point*, as you'll see in the reading, and it leads to an *equilibrium outcome*. Sorry for the confusion!

Remember that what you turn in for Part I should have 3 parts, as mentioned in the syllabus:

(a) Your responses to the reading questions below.

(b) Your own questions/comments on the reading.

(c) The amount of time you spent on Part I (including the time spent reading).

Reading Questions

1. Consider the second game we played in class today:

		Colin					
		A	B	C	D	E	F
Rose	A	4	−4	3	2	−3	3
	B	−1	−1	−2	0	0	4
	C	−1	2	1	−1	2	−3

   - Are there any dominated strategies for either player? Why or why not?
   - Use the maximin/minimax procedure to determine if this game has any saddle points.

2. The proof that all saddle points have the same value claims that all the inequalities put together must give us that a, b, c, and d are equal.
   (a) Why?
   (b) What, if anything, does this tell us about the possible number of saddle points in a game?
   (c) How does this proof apply to any number of saddle points and not just a and b?

Part II: Exercises (prepare for class Monday, October 27, 2025)

Chapter 2 Exercises 1, 2, 3, and **if you have time** play several rounds of "Infinite" Tic-Tac-Toe with other people (in the class or not in the class). Keep track of any insights you have from these (optimal strategies, who wins, etc.) and come to class prepared to discuss those.

Part III: Homework Problems (due Wednesday, October 29 at the beginning of class)

Chapter 2 Exercises 4 and 5