Part I (due at the beginning of class Friday, November 22, 2025)

Well, we didn't get through everything, so for Friday, let's note which of these you still want to talk about (I'm going to number them this time) and we'll discuss those people still want to discuss as part of class.

Questions People Have Asked That We Haven't Gotten to Discuss Yet

1. I don't like the fact that consistency is required for cardinal utilities. We say with the beast that people like security over the lottery. Is there any math adjustment for this?
2. Why does this [utility theory] matter/what is it used for? Why do we want to know this?
3. Fallacy questions (Chapter 9)
   - Fallacy 1 doesn't really make sense as a fallacy: I see that it's backwards, but still seems like it should work.
   - 2: isn't that how we defined rationality?
   - 3
     - the thing about scale changes by positive linear functions didn't make sense.
     - I think I mainly don't understand why the example given is false. The reasoning is false, but I can't tell if it's because they used a poor example or if I'm misunderstanding the fallacy.
     - What does "socially better" mean?
4. Can we talk about assigning cardinal utilities?
5. What is the "cardinal" utility? utility or options ranked on a number line?
6. It seems quite complicated to find the cardinal utilities.
7. I think the reasoning behind how we can transform games was unclear.
8. Do you need to preserve ratios of numbers to make an order preserving transformation?
9. What are zero sum games again?
10. What is "meaningful"?
11. On page 53, why must this line have a negative slope? What would be true of a matrix game with a zero, undefined, or positive slope?
12. Once we have utilities, is there a way we can find the linear function to turn them into actual values? Or are those things that are sort of given?
13. Generally speaking, how well does this kind of utility theory work as a predictor of the decisions humans like to make?
14. Is utilitarianism related to utility theory in more than name only?
15. Graph idea feels a little strange. (This was related to graphing the points to determine if the game is zero-sum, I think.)

Part II: Exercises (prepare for class Friday, November 21, 2025)

We'll do this one Friday.

1. Explain why each of the four decision methods described in Chapter 10 satisfy each of the first three axioms.

Part III: Homework Problems (due Wednesday, December 3 at the beginning of class)

Two players (you can choose their names) are playing a game with two jars, each of which contains 100 doubloons. On a player's turn, the player chooses one jar and takes anywhere from 1 to 10 doubloons out of that jar. The winner is the player who removes the last doubloon from either jar. Analyze this game.

Friday's mini-Celebration of Learning

Utilities: something(s) like Exercises 9.2, 3, 4, or 5.