For each of the games below, answer:

a) Is it a one-player, two-player or multi-player game?
b) Is it a simultaneous or sequential game?
c) Is it a zero-sum or nonzero-sum game?
d) Is it a symmetric or non-symmetric game?
e) Is it a cooperative or non-cooperative game?

For the definitions of these terms, read Part 1 of the course notes. For some of the games you can also click and see definitions. If you have trouble deciding what’s the right answer, explain your reasoning.

Here are the games:

1. Chess.
2. Poker.
3. Solitaire.
6. Prisoner’s Dilemma.
7. The Ultimate Game — the game of life itself, that we are all playing all the time.

**Battle of the Sexes.** Suppose that Alice and Bob are going to the movies. Alice wants to see the movie *This is 40* while Bob wants to see *Zero Dark Thirty*. Let’s say Alice and Bob each have two strategies:

1. Watch the movie they really want to see.
2. Watch the movie the other one wants to see.

If they both watch the movie they really want, each goes out alone and gets a payoff of 5. If they both watch the movie the other wants to see, they again go out alone and now each gets a payoff of -5. Finally, suppose one watches the movie they want while the other kindly watches the movie their partner wants. Then they go out together. The one who gets to see the movie they want gets a payoff of 10, while the one who doesn’t gets a payoff of 7. (They may not like the movie, but they get ‘points’ for being a good partner!)

9. Call Alice A for short, and call Bob B. Write down this game in normal form.
10. Is this a zero-sum game?
11. Is this a symmetric game?