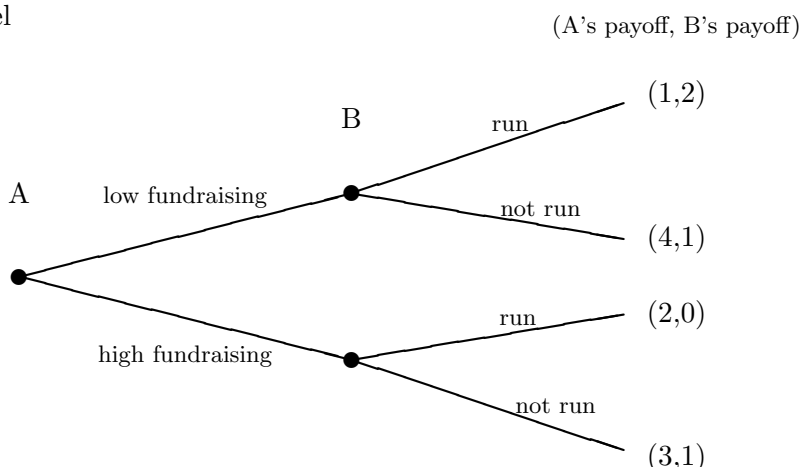


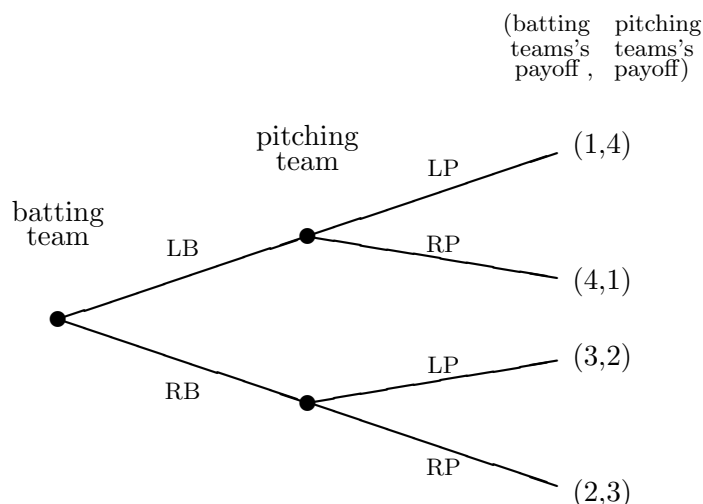
Addition to Homework Assignment # 2

**Instructions: Students need NOT hand in answers to these question.** They are designed simply to give students a chance to practice with the sequential games material introduced in class on November 1st. We'll cover these questions in class on Tuesday, November 6th.

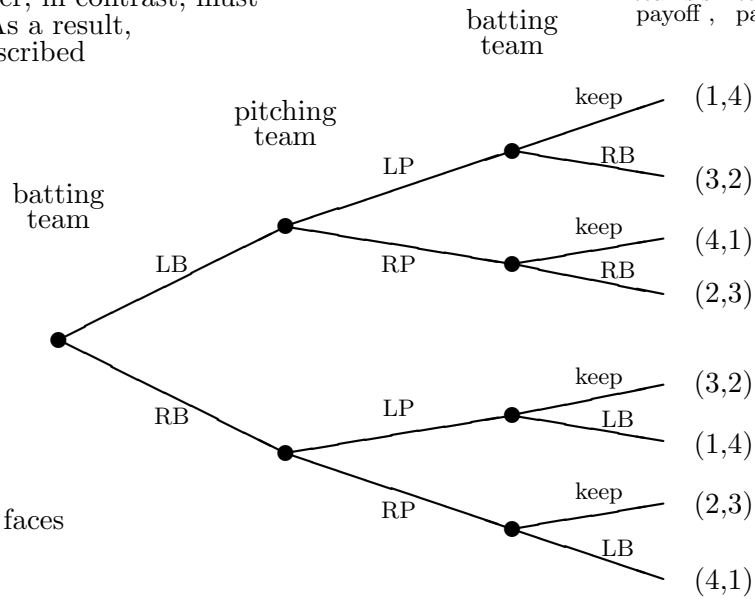
- Office-holder *A* has to decide whether to devote a low level of effort to fundraising or a high level of effort to the activity. Potential challenger *B* has to decide whether to run or not to run in the upcoming election. What is the *rollback equilibrium* of the illustrated game?  
[Note: higher payoff values indicate a more favorable outcome.]



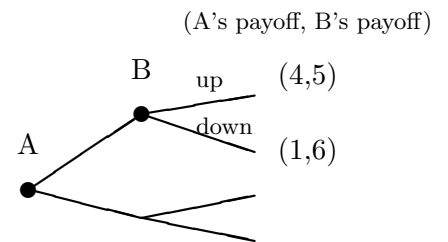
- Consider a baseball game in which the rules state that once it is announced that a pinch hitter is will take the place of a scheduled hitter, that batter must complete an at-bat. In such a game, a weak hitter is scheduled to bat in a crucial game situation, and the manager of the batting team has a choice between inserting a left-handed batter (LB) or a right-handed batter (RB). Assume that, since the starting pitcher is obviously tiring, the manager of the pitching team will — as soon as the pinch hitter is announced — bring in either a left-handed pitcher (LP) or a right-handed (RP) to relieve the starter. The manager of the pitching team prefers that a lefty pitcher face a lefty batter, or that a righty pitcher face a righty batter. The manager of the hitting team prefers his hitter to hit from the opposite side of the plate from which the pitcher throws. In a rollback equilibrium, which batter faces which pitcher?



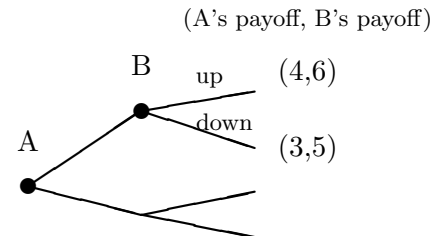
3. Suppose now that the rules of baseball differ from those described above. An announced pinch hitter can be replaced without actually batting. An announced relief pitcher, in contrast, must face at least one batter. As a result, in a situation like that described above, the manager of the batting team can (after the identity of the relief pitcher is announced) choose either to keep his original pinch hitter in the game or to switch to the other available pitch hitter. Given these rules, in a rollback equilibrium, which batter faces which pitcher?



4. In a two-player, sequential game, Player A chooses first and Player B second. Suppose that at his decision node, Player B says to himself: "Since Player A did what she did, I'll now carry through on my earlier statement by choosing 'up' rather than 'down.'" Was player B's earlier statement a threat, a promise, or neither?



5. In a two-player, sequential game, Player A chooses first and Player B second. Suppose that at his decision node, Player B says to himself: "Since Player A did what she did, I'll now carry through on my earlier statement by choosing 'up' rather than 'down.'" Was player B's earlier statement a threat, a promise, or neither?



6. In a two-player, sequential game, Player A chooses first and Player B second. Suppose that at his decision node, Player B says to himself: "Since Player A did what she did, I'll now carry through on my earlier statement by choosing 'up' rather than 'down.'" Was player B's earlier statement a threat, a promise, or neither?

