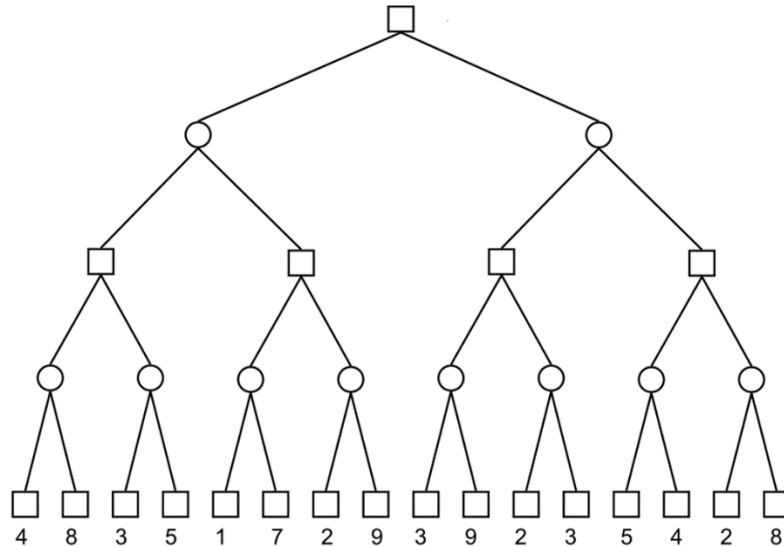
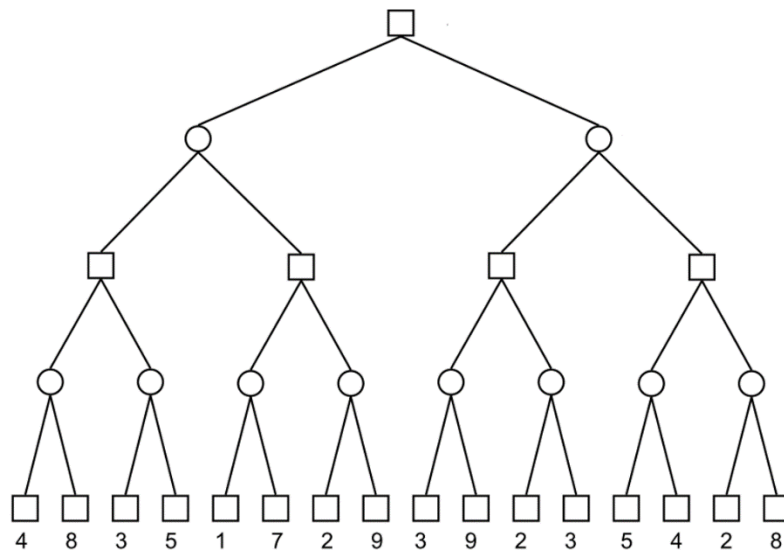


Homework/Pop Quiz #3 of the course: Theory of Computer Games.

1. Do the alpha-beta search to find the minimax value of the following search tree. You must mark windows at each node and indicate the pruned nodes.



2. For the above problem, assume that the alpha-beta window at the root is (4, 7). Do the alpha-beta search again.



3. Please prove why Corollary 1 is correct. Note that Corollary 1 says: “In the best case, the alpha-beta procedure examines exactly $b^{\lceil d/2 \rceil} + b^{\lfloor d/2 \rfloor} - 1$ positions on level d , where d is even.”