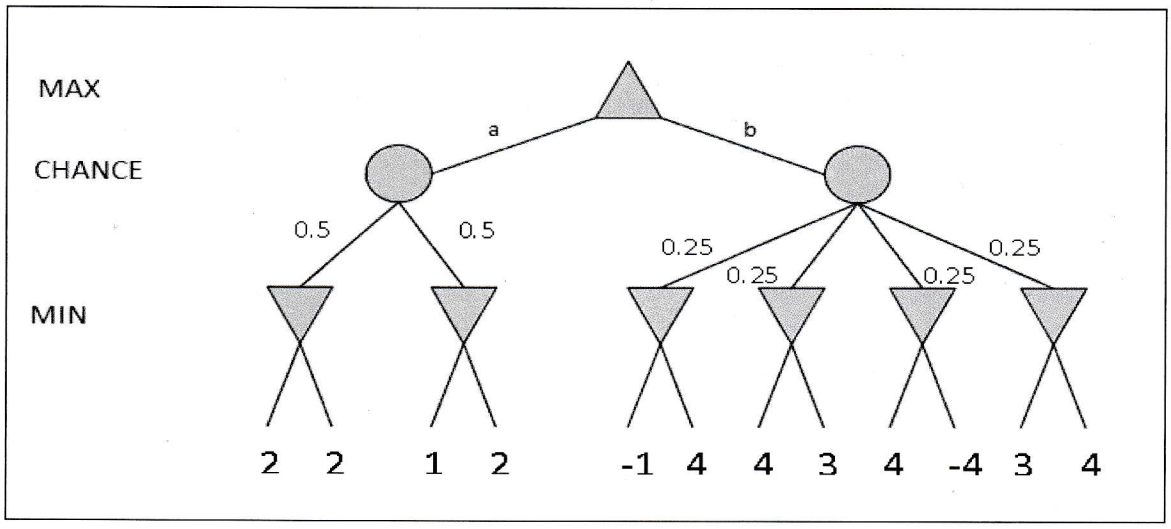
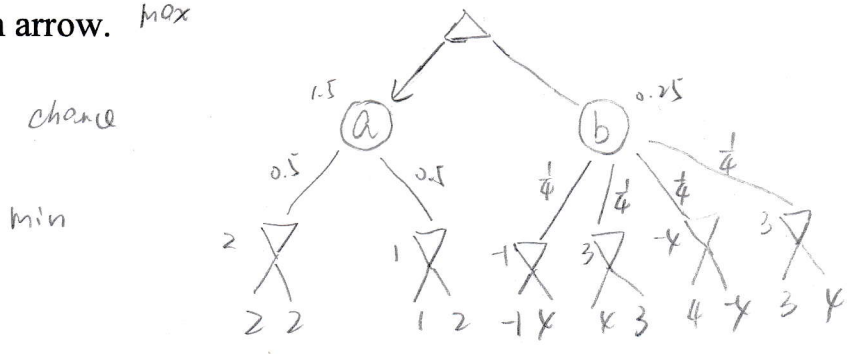
Question-3 [20 points]:

In this question we tackle the problem of stochastic games. We will be using the EXPECTIMINIMAX(s) function described in section 5.5 in the book to evaluate the value for the MAX node. The figure below shows the complete game tree. Assume that the evaluation order of the leaf nodes are from left-to-right order, and before the leaf node is evaluated, we do not know the value of that leaf node or any other node to right side of that leaf node. You may assume that the possible range of values is -4 to 4.



a) [4 Points] Copy the figure, mark the value of all the internal nodes (including the chance node), and indicate the best move to the root with an arrow.



a: $0.5 \times 2 + 0.5 \times 1 = 1.5$

b: $\frac{1}{4} \times (-1 + 3 - 4 + 3) = 0.25$

The best move is a