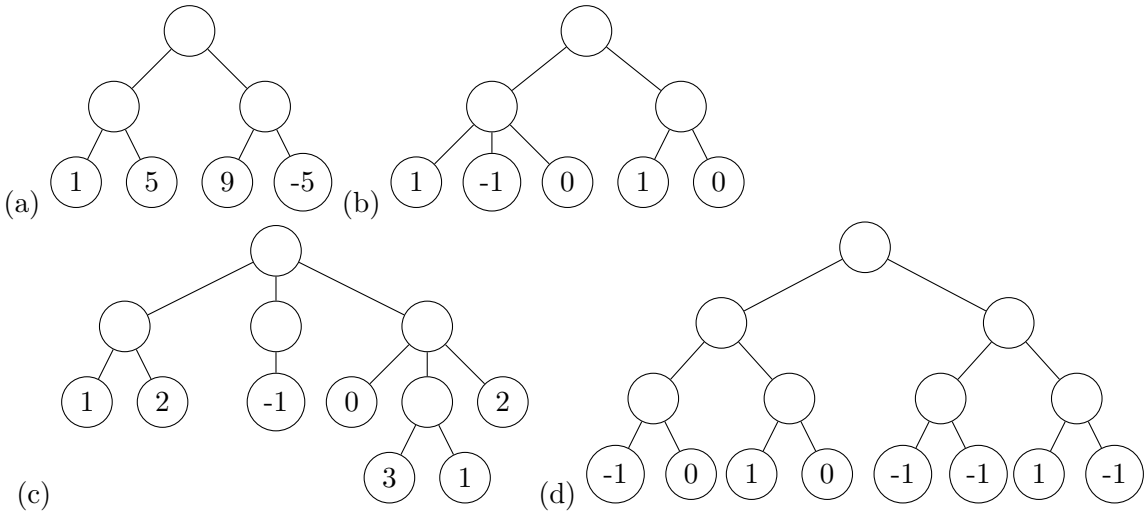
Worksheet 3: Game tree search

1. Complete the Minimax algorithm for the following game trees, thus determining the optimal next move to be made by the maximising player.



2. **Hex** Fill in the Minimax values on the Hex game tree (download from the web version of this worksheet). Start with the blank 2×2 board where it is red to go first.

3. **Snort**

   Played on a graph with each vertex either uncoloured or coloured one of two colours. Two players play by colouring vertices in their colour, subject to the proviso that the vertex being coloured is not adjacent to a vertex of the opponent's colour. The first player who cannot make a legal move loses.

   - Here one move has been made by blue.
   - Draw a game tree and determine the optimal next move.
   - Rather than analyse every possible move, what simplifications could you make to make the algorithm more efficient?