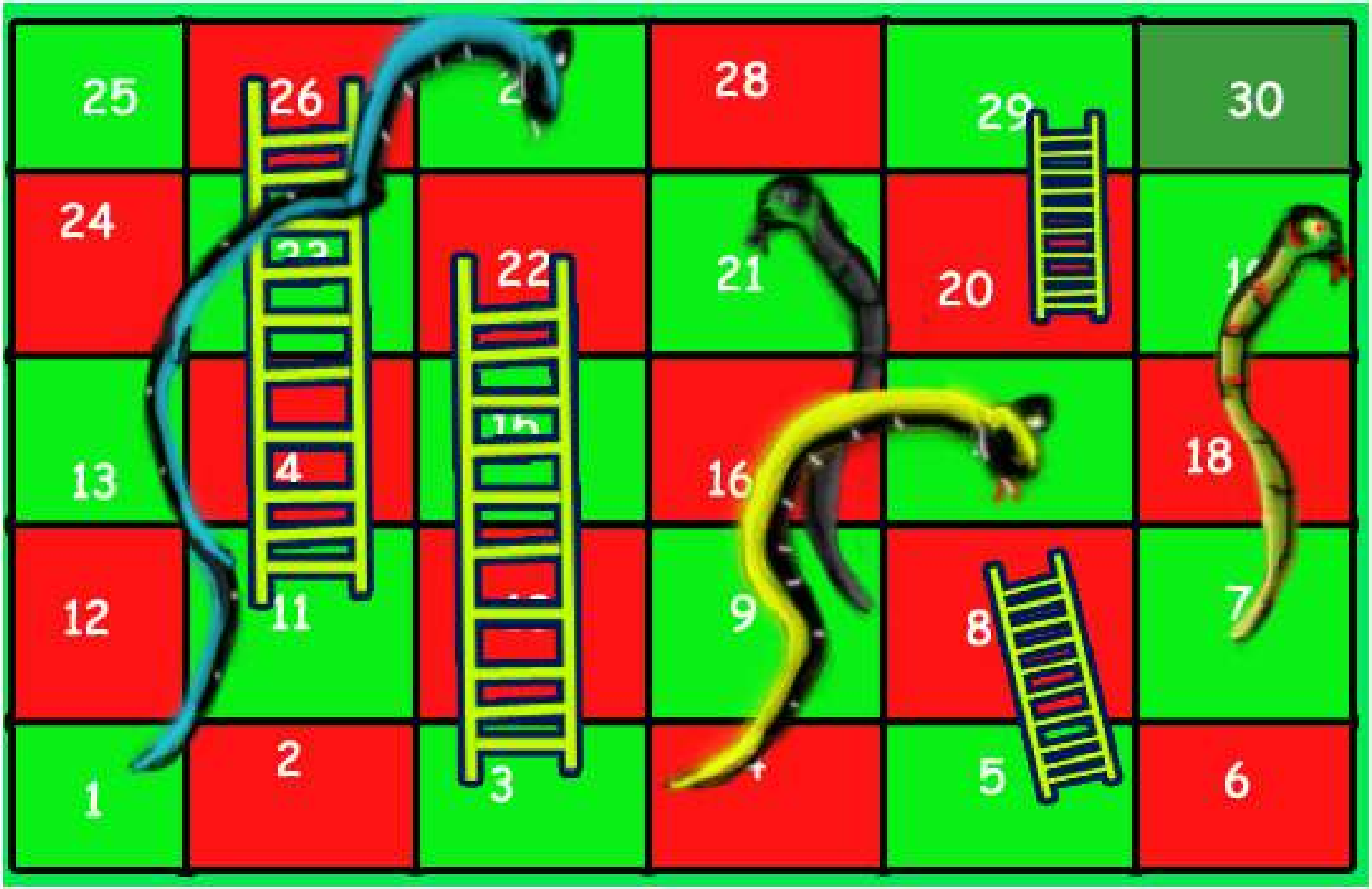
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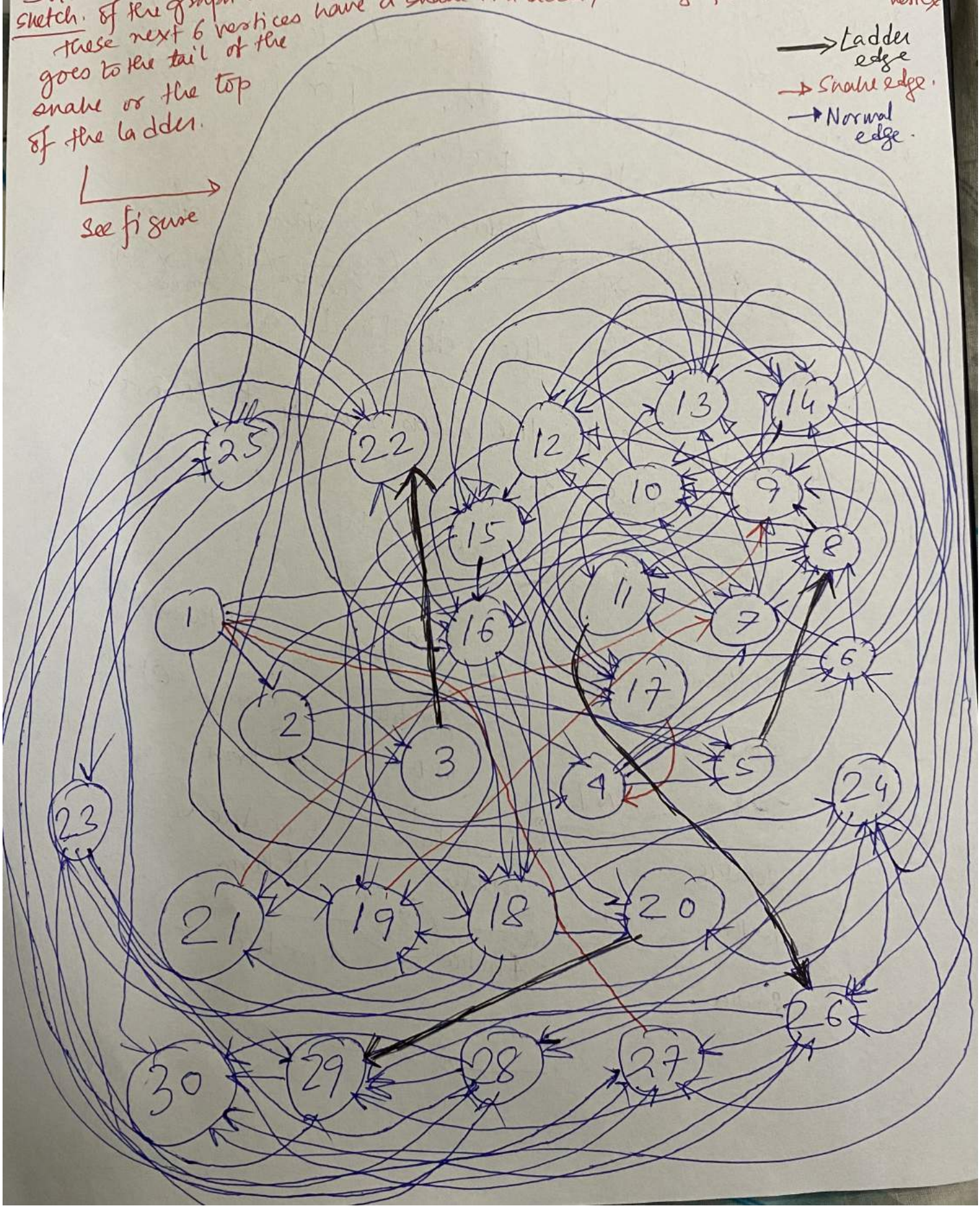
Given a snake and a ladder board, find the minimum number of dice throws required to reach the last cell from the first cell. If the player reaches a base of the ladder the player climbs up the ladder. If he/she reaches a cell with a snake mouth, he goes to the cell with the tail of that snake.

Soln:

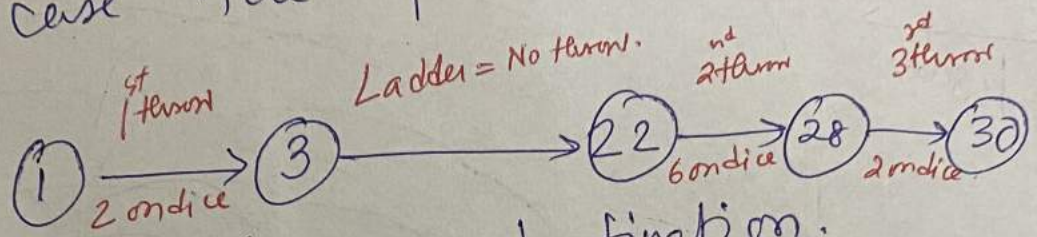
The trick is to draw a directed graph as follows. Every vertex sketch. of the graph has edges (directed) to the next six vertices. If any of these next 6 vertices have a snake or a ladder, the edge from the current vertex goes to the tail of the snake or the top of the ladder.



see figure

Once we have built this graph, the problem reduces to find a shortest path in this graph.

Now since this graph is unweighted we can use any one of the graph traversal techniques, (BFS or DFS) to obtain the shortest path. For instance in this case the path



would lead to the destination.

Hence we obtain that the min number of throws in this case should be 3.

There can be other solutions like.