$5^{\text {th }}$ Junior Balkan Olympiad in Informatics
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Day 1

Pawns - Solution

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We can solve this problem this way: The configuration of the pawns that is on the play table at a certain moment represents the current state. It is known the initial state and the final one. We use a queue that first has a single element, the initial state. In the current stage we add to the queue a number of maximum $4 \cdot \mathrm{~N}$ stages, which can be obtained from the current state. In order to store one state we use a number written in base 3. The estimated time complexity is: $\mathrm{O}\left(\mathrm{N} \cdot 3^{\mathrm{N}}\right)$.
You can reach maximum 60 points using backtracking or greedy solutions.

