II Spanish Parallel Programming Contest
MPI+OpenMP test: Problem D

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To solve the parallel problem only the function sec(...) of the sequential program is modified. MPI parallelism is used. The first step is to put the pieces in an array and send them to the other nodes, so that all the nodes have a copy of the pieces.
The first piece can be placed at any position on the checkerboard if it is feasible.
We distribute the positions of the checkerboard between the p processes. Each process puts the first piece on each of the positions it has assigned, and continues with the sequential program with the other pieces. The process will do this for each position assigned.
Each process works on a different solutions space, because the position of the first piece is always different. Each process gets the best solution of its solutions space and sends it to the master process. The master process receives the partial solutions and selects the best solution.