Activity 1. The numerical square with branch and bound

The heuristic value I used is to count the number of “?” in the current node. The one that reaches 0 is the solution.

I implemented the algorithm using branch and bound and I get the following solutions.

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| ***Test case*** | ***Time for first solution*** | ***Number of Nodes (backtracking)*** | ***Time for first solution (BaB)*** | ***Number of Nodes (BaB)*** |
| Test00 | LoR | 76 | LoR | ? |
| Test01 | LoR | 126492 | 3924 | ? |
| Test02 | LoR | 2260 | 82 | ? |
| Test03 | 618 | 12852796 | Oot | ? |
| Test04 | 7257 | 165061612 | Oot | ? |
| Test05 | 665 | 9316354 | Oot | ? |
| Test06 | 125 | 1355022 | Oot | ? |
| Test07 | 17278 | 295712948 | Oot | ? |