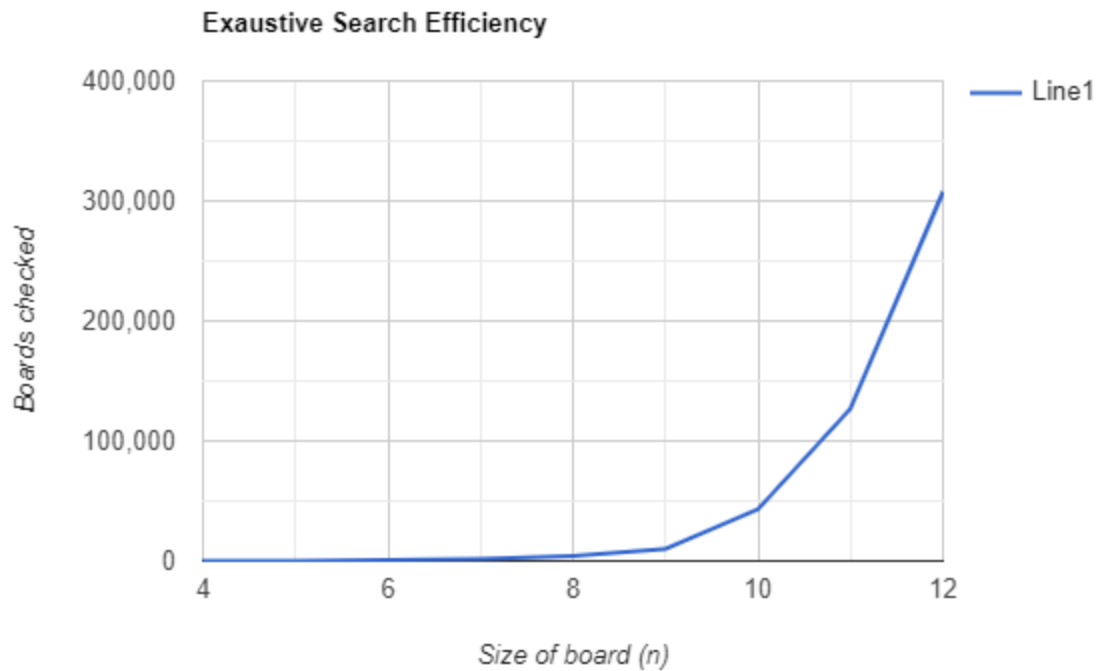


My exhaustive algorithm for solving the N queens problem uses “!(board.anyQueenAttacked())” (Line 109 of NQueens.java) as its basic operation. The amount of times this basic operation is checked for each n is displayed below. Clearly, the amount of basic operations can very quickly grow when n is increased.



Points on the above graph:

(4,7), (5,175), (6,662), (7,1605), (8,4214), (9,9982), (10,43086), (11,126774), (12,307501)

By comparing this to the iterative algorithm, we can see that the work done by the computer is much more consistently predictable, but also astronomically more intensive. When $n = 9$, this method is already running more basic operations than any value below 20 in the iterative search algorithm. Being that it has little to no optimization, this was to be expected. Conclusion: This method is more consistent, but far less efficient than the iterative method.