**Question 4 (20 points)** Implement the basic backtracking algorithm. Generate 10 random Sudokus with puzzle.txt and evaluate the solver. Report the average and variance of the performance.

* Generated 10 random Sudoku and evaluated

Time taken to run : 1.18

Time taken to run : 0.33

Time taken to run : 0.36

Time taken to run : 3.47

Time taken to run : 0.45

Time taken to run : 0.47

Time taken to run : 0.72

Time taken to run : 3.36

Time taken to run : 4.69

Time taken to run : 0.38

Mean : 1.541

Variance: 2.69965444444

**Question 5 (20 points)** Add minimum remaining values (MRV) heuristic + forward checking + arc consistency to the algorithm. To make arc consistency simpler, you can trigger constraint propagation only when a variable with just one valid value left is discovered. Generate 10 random Sudokus with puzzle.txt and evaluate it. Report the average and variance of the performance.

* Generated 10 random Sudoku and evaluated

Time taken to run : 0.399183988571

Time taken to run : 0.371510982513

Time taken to run : 0.449306964874

Time taken to run : 0.339998006821

Time taken to run : 0.383285045624

Time taken to run : 0.517786026001

Time taken to run : 0.59493303299

Time taken to run : 0.229640960693

Time taken to run : 0.334640979767

Time taken to run : 0.286954164505

Mean : 0.384

Variance: 0.0116933333333