# Analysis

The algorithm we used is a variation of the elimination strategy used in Mastermind-like games to reduce the number of possible numbers that the codebreaker (in this case, the computer) must guess from. The basic idea is to make guesses that eliminate as many possibilities as possible with each one, so that the number of remaining possibilities is reduced as much as possible. The codebreaker could start by making a guess that is likely to eliminate many possibilities. For example, the codebreaker could make a guess that has a few common digits with the target number, such as 123467. This guess will eliminate all the numbers that have no common digit with the secret code, leaving only a small number of possibilities. The codebreaker can then continue making guesses based on the remaining possibilities, trying to eliminate as many possibilities as possible with each guess. By making guesses that eliminate as many possibilities as possible with each guess, the codebreaker can significantly reduce the number of guesses required to solve the game.