

A Mathematical “Mastermind” Game

This game is played with two players, each with paper and pencil. Each player starts by picking a random 3 digit number, where each digit could be anything from 0 to 9. So, your number could begin with a “0”. This number is put on a piece of paper and hidden from the other player.

Now a third piece of paper is passed back and forth between the players, where each player alternating, tries to guess the other players number. After each guess, some “feedback” is given on the guess as to how accurate the guess was. This feedback takes the form of two digits in a bracket separated by a comma, such as (2, 1). The first digit tells your opponent how many digits of the unknown number he has correct, while the second digit tells your opponent how many digits are in the correct spot. So, if player A chose the number 382 and player “B” guessed the number 583, then you would give him or her the feedback (2, 1) since two of the digits are correct (the 8 and the 3), but only one digit (the 8) is in the proper spot.

When I play this game, I start by writing out “0 1 2 3 4 5 6 7 8 9”. And then I cross out the digits that I discover are not correct, and I circle any digit that I know is correct. So, if I was player “B”, on the above example and I guessed 197, the feedback I would get would be (0, 0) since none of the digits are correct. This is a superb result! I get to cancel out those three digits right away.

So now it looks like this: “0 ~~1~~ 2 3 4 5 6 ~~7~~ 8 ~~9~~”, where the red digits are now eliminated. When you get the feedback (3, 3), then you have won, as long as both players have had the same number of turns. This feedback means you have the correct three digits, AND they are all in the proper place.

If you begin to find this game a bit easy, then move up a bit by choosing four digit numbers instead of three digit numbers. Have fun, and good logic!

Answers to Last Week’s Puzzle

This answer will arrive in a day or to as I am off to a weekend “retreat” with my lovely wife.