There are two players. Each player has seven “slots.” The slots are ordered in the following way. The first is the “millionth” slot; the second, the “hundred-thousandth” slot; the third, the “ten-thousandth” slot,” etc.

Player 1 begins by drawing a card, which has a random value uniformly distributed on \{0,1,2,\ldots,8,9\}. Player 1 then learns the value of the card draw, and will have to put it in one of his slots. The value of the card, and the slot where the card is placed are then observed by Player 2. A slot that has been occupied by a card will not be available again.

Next, Player 2 draws a card, which, again, has a value uniformly distributed on \{0,1,2,\ldots,8,9\}. Player 2 then puts it in one of his slots, in the same fashion as Player 1 has done.

Players then alternate. All card draws are identically and independently distributed on \{0,1,2,\ldots,8,9\}. The game goes on for seven draws for each player.

After a total of fourteen draws, each player will have built a seven-digit number. The ordered position of a slot defines the value of the card placed there. For example, if Player 1 has put a card with the number three on the “millionth” slot, that means three millions; a card with the number seven on the “tenth” slot, that means seventy, etc. The value of each player’s seven-digit number is the sum of the contributions from the seven slots, and well-defined.

The player who has constructed the larger number wins.

How do you play?

Albert Ma