

Alice at the logicians convention.

Alice was walking among the paths of Never Land when from nearby she heard some voices. Being a curious person she climbed a tree and has been witness to a scene...

Around gigantic table there gathered 31 men. Before them there was the Speaker, funny, wearing scarlet tunic professor with short, white beard. He gestured for everyone to be silent and has given a strangest speech Alice has ever heard.

- Brother logicians. We, the most disciplined minds of the Never Land, have gathered here today, on our 125th annual convention. We will hear the amazing tales of logic, we will be thinking about things unthinkable for common mortal, we will pass the Mountains of Endless Queries and the most demanding Paths of Intellect. But first we must make sure that no intruder is hiding within our circle.

After that the professor started to walk around the table, at each passed logician he paused and stuck a colored dot on their foreheads. After his return to his spot at the top of the table, he began to explain the rules of this odd experiment.

- Each one of you see the dots on the foreheads of your colleagues, but I was careful, so no one saw the color of his own. Your task is to find out the color your forehead was marked with.

- There is only one rule and it is simple. Each minute this bell will make a sound. If at this very moment some of you will know the color of the dot you're wearing, they must stand from the table and join me at the nearby clearing where our convention will be continued. If you still won't know the color of your dot, you are to remain at the table.

- Someone who will remain at the table, when he should stand up, or someone who will stand up when he should remain at the table, can't of course title himself logician and will be removed from the convention without a right to ever return.

Professor was about to leave when his attention was drawn by the troubled look of the smartest of novices. He cleared his doubts with this words:

- Do not be afraid youngster. It is possible to solve this task. But, of course, you may not contact each other in any way.

The novice smiled because the Speaker of the Most Disciplined Minds of the Never Land may not make false statements.

Before the eyes of completely confused now Alice, professor has left the convention and the experiment has begun.

At the first sound of the bell four persons have left the table. At the second sound, all with red dots stood up and left together. At the third sound no one moved, but at the fourth at least one person has reacted. Novice, who was mentioned before and his sister, with dots of different colors, have left shortly after, but each one of them, before the last sound of the bell.

Tired with long words Alice has fallen into deep slumber before the test was finished. Can you tell her how many times the bell rang before the table was left empty?