

# PUZZLING CARTOON

## - LOGICAL JOB OFFER -



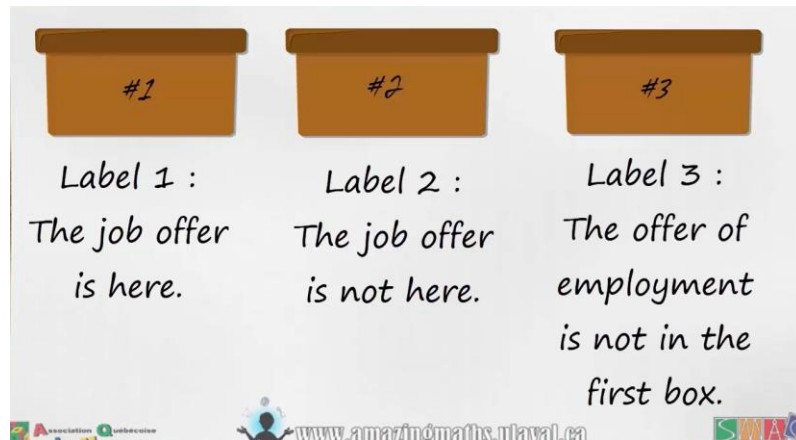
AMAZINGMATHS

### Materials :

- Video of the puzzle
- Sheets of paper
- Pencils

## The Puzzle

Mathilda has passed several tests to get a new job. Now, she is told that she will get the job only if she can solve the following puzzle. There are three boxes like these. On each box is affixed a label. Only one of the labels is true. The label on the first box says: "The job offer is here." The label on the second box says: "The job offer is not here." The label on the third box says: "The offer of employment is not in the first box".



Which box do you think Mathilda should choose?



# PUZZLE SOLUTION



## The answer:

The offer is in the second box.

## First solution:

The offer is in the second box, because the labels on boxes 1 and 3 cannot be true simultaneously, nor be false simultaneously. That is because they contradict each other. Then, one of the two labels is true and the other is false. Since we know only one label is true and that it is either the first one or the third, then the second one is necessarily false. The second label says: "The job offer is not in this box" and we know that is false.

Mathilda must then open the second box.

## Second solution:

We know that only one label is true. However, if the first label was true, then the second one would be too. The same thing goes if the second label was true: the third or the first one would also be true. We then know that the label on the third box is the only one that can be true.

We can then deduce that the offer is in the second box.