

PUZZLING CARTOON

-WHO'S LYING?-



AMAZINGMATHS

Materials:

- Video of the puzzle
- Sheets of paper
- Pencils

The puzzle

Two friends meet in a park. One is named Frederique, the other one is named Sophie. One is wearing a yellow sweater and the other one is wearing a pink sweater. The one wearing a yellow sweater says: "I am Frederique". The other one answers: "I am Sophie".



Knowing at least one of the two friends lied, what color is Sophie's sweater?



PUZZLE SOLUTION



The answer:

Sophie's sweater is yellow.

The solution:

Considering the situation, there are three possibilities: Sophie is lying, Frederique is lying or both are lying.

Let's assume only one of the two friends is lying and that it is the person wearing the yellow sweater. Since she says: "I am Frederique", then it must be Sophie. However, the other one answers that she is also named Sophie, which is inevitably a lie since there cannot be two Sophies. We conclude that both of them are lying, because it is impossible that one is lying while the other one is telling the truth.

Therefore, Frederique is wearing a pink sweater and Sophie is wearing a yellow sweater.