

Hidden Chocolates

Enigma n°3

14th December 2023

Paul-Henry Cournède (PHC) and Céline Hudelot (CH) are sitting face to face. We tell them there are 50 black chocolates, and 50 white chocolates, for a total of 100 chocolates. There are 50 chocolates behind Céline, and 49 behind Paul-Henry. One chocolate is hidden.

The two professors can not see the chocolates behind them-self, but they can see the ones behind the other professor. We ask them iteratively "Do you know what is the color of the hidden chocolate?".

They answer as follows:

1. **PHC**: "I do not know."
2. **CH**: "I do not know."
3. **PHC**: "I do not know."
4. **CH**: "I do not know."
5. **PHC**: "I do not know."
6. **CH**: "I do not know."
7. **PHC**: "I do not know."
8. **CH**: "I do not know."
9. **PHC**: "I do not know."
10. **CH**: "I do not know."
11. **PHC**: "I do not know."
12. **CH**: "I do not know."
13. **PHC**: "I do not know."
14. **CH**: "I do not know."
15. **PHC**: "I know! It is white!"



Céline and Paul-Henry

How many black chocolates are behind Céline?