

**Please do not write on the subject, and do not forget to hand it back at the end.**

## **PROBABILITIES**

A high-school decided to promote coding abilities among its students and organised a “coding week”, using two internet websites: “hourofcode.com” and “lightbot.com”.

The students were shown how to use them at school, and were advised to train at home.

At the end of the week half the students had visited “hourofcode.com” at home, and 20% had visited “lightbot.com” at home.

10% of those who had visited “lightbot.com” had also visited “hourofcode.com”.

We choose a student from this school at random.

- 1) What is the probability that this student has visited both websites at home?
- 2) We suppose we know that this student has visited “hourofcode.com” at home.

What is the probability that this student has also visited “lightbot.com” at home?

- 3) Using the data and the result of question 2, can we reckon that one of the websites seems more efficient than the other to promote coding?
- 4) What is the probability that the student has visited at least one of the two websites at home?

Do you think the “coding week” was a success?

- 5) What is the probability that at home the student has visited one of the websites but not the other?