ShaKer 2020 Coding Battle

F. « Merch time ! »

Problème

You and your friend Bob are used to attending local concerts together. Once they're over, you usually challenge each other on "items hunt" !

The base principle is simple : you set out to spend **a precise amount of money** on a items stall just outsite of the concert. You have to spend exactly **this amount** buying stuff, with every piece being worth between 1€ and 14€. If you reach this goal and Bob doesn't, you win the bet.

Bob quand il s'aperçoit qu'il ne peut pas gagner.

For all these years, Bob has been a rough and cunning opponent, and too often he won. Time for a revenge at last ! but this time, you'll be a step ahead...

Outside of the concert room, many stalls are available, and it's your responsability to choose the one stall where the duel will take place. For the occasion, you'll have written an algorithm which will establish **whether or not there is a way for you to spend exactly the amount set AND make sure Bob can't**.

Your turn now to write this program !

Input

- On the first line, an integer Q representing **the amount to spend** ($1 \leq Q \leq 50$) ;
- On the second line, an interger N representing **the number of items available on the stand** ($1 \leq N \leq 30$) ;
- On the third line, N integer separated by spaces representing each **the price P_i of the i-th item** ($1 \leq P_i \leq 14$).

Output

Print "OUI" if you have a strategy to win inevitably, "NON" otherwise.

Examples

Input
21 6 7 13 13 8 8 8

Output
IMPOSSIBLE

On this first example, Bob and you each have 21€. You can choose among 6 available items. 1 is worth 7€, 2 are worth 13€ and 3 are worth 8€. There is only one way for you to spend exactly 21€ : you have to buy one 8€ item and one tagged 13€. Bob will have to choose between one 13€ item and 2 8€ items. He will also achieve his goal, and you could not win this time.

Example 2

Input
20 4 6 14 10 7

Output
POSSIBLE

On the second example, you'll have a budget of 20€. In this configuration, you could spend all your money buying 6 and 14€ items ; Bob could buy only the 10€ and 7€ products. He won't spend his money entirely, and you're the winner !

Example 3

Input
10 11 6 1 1 1 1 2 1 7 5 2 1

Output
POSSIBLE

In the third example, you have a 10 euro budget. You have a lot of possibilities to spend it all : buying a 6 € and 4 1€ items, or 7€, 2€ and 1€... But if you take all the 1€ and 2€ items, only the 7€ and 5€ items will be left. Bob couldn't spend all his money, and you're declared winner, hence "POSSIBLE".