Problem G. Primary Task

Time Limit 1000 ms
Mem Limit 262144 kB

Dmitry wrote down t integers on the board, and that is good. He is sure that he lost an *important* integer n among them, and that is bad.

The integer n had the form \text{10^x} ($x \geq 2$), where the symbol '\text{^}' denotes exponentiation.. Something went wrong, and Dmitry missed the symbol '\text{^}' when writing the *important* integer. For example, instead of the integer 10^5, he would have written 105, and instead of 10^{19}, he would have written 1019.

Dmitry wants to understand which of the integers on the board could have been the *important* integer and which could not.

Input

The first line of the input contains one integer t ($1 \leq t \leq 10^4$) — the number of integers on the board.

The next t lines each contain an integer a ($1 \leq a \leq 10000$) — the next integer from the board.

Output

For each integer on the board, output "YES" if it could have been the *important* integer and "NO" otherwise.

You may output each letter in any case (lowercase or uppercase). For example, the strings "yEs", "yes", "Yes", and "YES" will be accepted as a positive answer.

Examples

Input	Output
7 100 1010 101 105 2033 1019 1002	NO YES NO YES NO YES NO