Magic Number

A magic number is a number formed by concatenation of numbers 1, 14 and 144. We can use each of these numbers any number of times. Therefore 14144, 141414 and 1411 are magic numbers but 1444, 514 and 414 are not. Given a number, determine if it is a magic number or not.

Input

Input contains multiple test cases and is terminated by end of file. Each test case contains an integer n in a line, $(1 \leq n \leq 10^{18})$. This number doesn't contain leading zeros.

Output

For each test case, print YES if n is a magic number or NO if it's not, in a separate line.

Sample Input

114114

414

15

Sample Output

YES

NO

NO