

Light, more light

The Problem

There is a man named "mabu" for switching on-off light in our University. He switches on-off the lights in a corridor. Every bulb has its own toggle switch. That is, if it is pressed then the bulb turns on. Another press will turn it off. To save power consumption (or maybe he is mad or something else) he does a peculiar thing. If in a corridor there are n bulbs, he walks along the corridor back and forth n times and in i 'th walk he toggles only the switches whose serial is divisible by i . He does not press any switch when coming back to his initial position. A i 'th walk is defined as going down the corridor (while doing the peculiar thing) and coming back again.

Now you have to determine what is the final condition of the last bulb. Is it on or off?

The Input

The input will be an integer indicating the n 'th bulb in a corridor. Which is less than or equals $2^{32}-1$. A zero indicates the end of input. You should not process this input.

The Output

Output "yes" if the light is on otherwise "no", in a single line.

Sample Input

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3
6241
8191
0
```

Sample Output

```
no
yes
no
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