Practical numbers
P72581_en

Vint-i-unè Concurs de Programació de la UPC - Semifinal (2023-06-28)

A practical number is a natural n such that all smaller naturals can be represented as sums of distinct divisors of n. For instance, 12 is a practical number, because all numbers from 1 to 11 can be expressed as sums of 1, 2, 3, 4, and 6: $5 = 2 + 3$, $7 = 1 + 6$, $8 = 2 + 6$, $9 = 3 + 6$, $10 = 1 + 3 + 6$, and $11 = 2 + 3 + 6$.

Given several naturals, are them practical numbers?

Input

Input consists of at most 50 naturals, all between 1 and 10^6.

Output

For each given natural, print "`yes`" or "`no`" depending on whether it is a practical number or not.

Sample input

```
1
3
12
999998
999999
1000000
```

Sample output

```
yes
no
yes
no
no
yes
```

Problem information

Author : Salvador Roura
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