At last, an interesting and difficult problem!   P69284_en
Vint-i-dosè Concurs de Programació de la UPC - Final (2024-10-02)

Here, we say that a natural n is primeful if it is possible to obtain a prime number by deleting some (possibly none) digits from n.

For example, 6814 is primeful because deleting 8 and 4 results in 61, which is prime.

Given several n, can you determine whether they are primeful or not?

Input

Input consists of several n, all between 1 and $10^{10^5} - 1$.

Output

For every given n, tell if it is primeful or not.

Sample input	Sample output
6814	yes
1	no
9609	no
7	yes
77	yes
9088164	yes
444444444444444444	no
660000498	yes
90014	yes
46666669	no
60649	yes

Problem information

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