

## 6257 Chemist's vows

Chemist Clara swore a solemn vow — from now on, she can only speak atomic element symbols. Of course, this limits her ability to talk. She can say, for example, “I Am CLaRa” (as I is the symbol of iodine, Am is americium, C is carbon and so on). She can also say “InTeRnAtIONAl”, but she has a lot of trouble with “collegiate”, “programming” and “contest”.

Given a word, determine whether Clara can speak it (i.e. if it is a concatenation of atomic symbols). Without your help, she might as well have taken silence vows!

You may identify upper- and lowercase letters, as Clara cannot speak uppercase anyway. In case you forgot the elements' symbols, here is the complete periodic table:

H																He	
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	*	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	**	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn			Fl			Lv

\* La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb Lu

\*\* Ac Th Pa U Np Pu Am Cm Bk Cf Es Fm Md No Lr

### Input

The first line of the input contains the number of test cases  $T$ . The descriptions of the test cases follow:

Each test case is a single lowercase word over the English alphabet. The length of the word is positive and does not exceed 50 000.

### Output

Print the answers to the test cases in the order in which they appear in the input. For each test case print a single line containing the word ‘YES’ if Clara can say the given word, and ‘NO’ otherwise.

### Sample Input

```
4
international
collegiate
programming
contest
```

### Sample Output

```
YES
NO
NO
NO
```