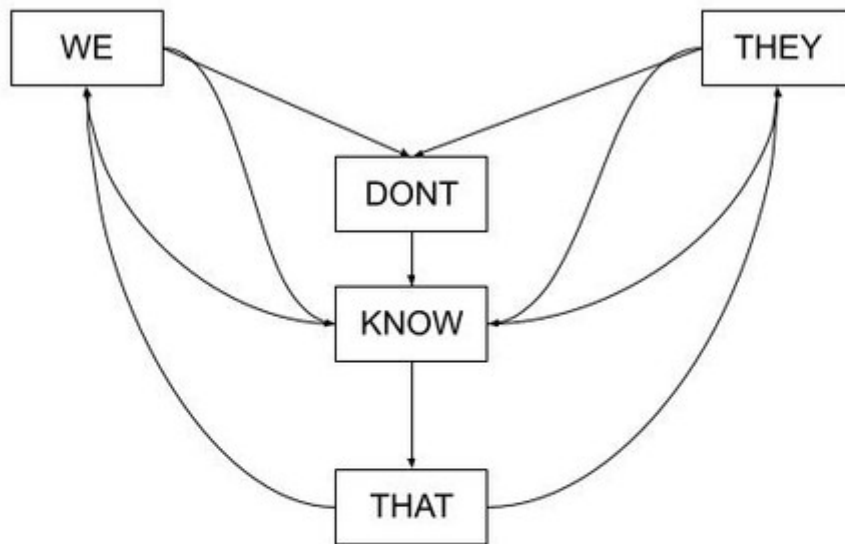


# Grammar (Solved) (100 / 100)

Catatan: Penterjemahan soalan dalam Bahasa Melayu disertakan di bawah. Sekiranya terdapat perbezaan antara versi Bahasa Inggeris dan versi Bahasa Melayu, versi Bahasa Inggeris akan diutamakan.

## Statement

We say a sentence is *grammatically correct* if it consists only of the words “THEY” “DONT” “KNOW” “THAT” or “WE” and the sentence can be traced by the following edges in the following graph:



WE → “DONT”, “KNOW”

THEY → “DONT”, “KNOW”

DONT → “KNOW”

KNOW → “WE”, “THEY”, “THAT”

THAT → “WE”, “THEY”

For example, “WE KNOW WE KNOW WE KNOW THAT WE”, “KNOW” and “THEY DONT KNOW” are *grammatically correct* sentences.

You want to know if the sentences given are *grammatically correct* sentences.

## Input Format

There are  $T$  test cases. The first line consist of an integer  $T$  ( $1 \leq T \leq 500$ ).

$T$  lines follow:

- The first line contains the number of words in the sentence,  $N$ .

- The second line contains  $N$  words, containing only uppercase letters (A-Z).

It is guaranteed that the sum of  $N$  across all  $T$  test cases is at most  $10^5$ .

## Output Format

For each of the test cases, in the  $i$ -th line, output YES if the  $i$ -th sentence is a *grammatically correct* sentence, and output NO otherwise.

## Sample Input

```
4
2
WE KNOW
5
THEY KNOW WE DONT KNOW
2
WE THEY
5
I KNEW THAT THEY KNOW
```

## Sample Output

```
YES
YES
NO
NO
```

## Explanation

The first and second sentences can be traced from the graph.

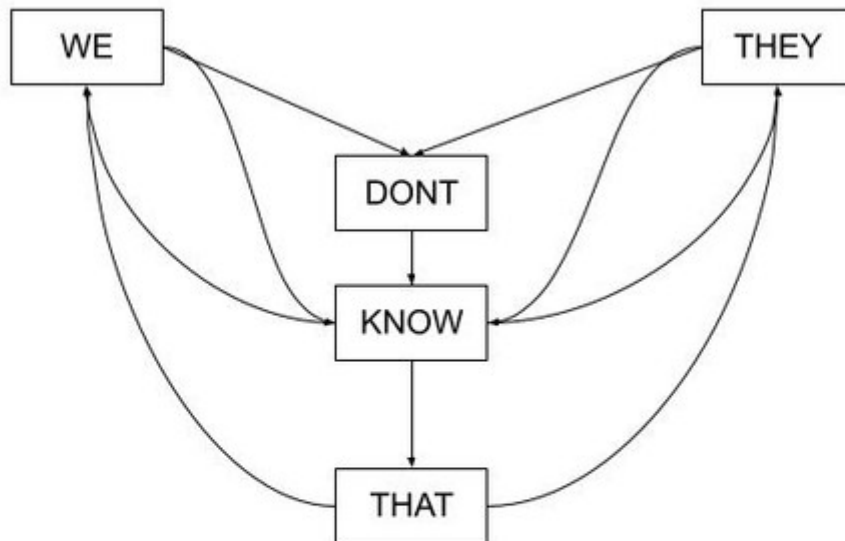
For the third sentence, “WE” cannot be followed by “THEY”.

For the fourth sentence, “I” and “KNEW” are not valid words.

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## Pernyataan

Kita katakan bahawa suatu ayat adalah *bertatabahasa betul* jika ia terdiri daripada hanya perkataan-perkataan “THEY” “DONT” “KNOW” “THAT” atau “WE” dan ayat tersebut boleh dijejak menggunakan sisi-sisi dalam graf berikut:



WE → “DONT”, “KNOW”

THEY → “DONT”, “KNOW”

DONT → “KNOW”

KNOW → “WE”, “THEY”, “THAT”

THAT → “WE”, “THEY”

Sebagai contoh, “WE KNOW WE KNOW WE KNOW THAT WE”, “KNOW” dan “THEY DONT KNOW” adalah ayat-ayat yang *bertatabahasa betul*.

Anda ingin mengetahui sama ada ayat-ayat yang diberi adalah *bertatabahasa betul*.

## Format Input

Terdapat  $T$  kes cubaan. Baris pertama terdiri daripada satu integer  $T$  ( $1 \leq T \leq 500$ ).

Diikuti dengan  $T$  baris:

- Baris pertama mengandungi bilangan perkataan  $N$  dalam ayat tersebut.
- Baris kedua mempunyai  $N$  perkataan, mengandungi hanya huruf besar (A-Z).

Diketahui bahawa hasil tambah  $N$  merangkumi semua kes cubaan  $T$  adalah tidak lebih  $10^5$ .

## Format Output

Bagi setiap kes cubaan, pada baris ke- $i$ , output YES jika ayat ke- $i$  adalah *bertatabahasa betul*, dan output NO jika sebaliknya.

## Contoh Input

```
4
2
WE KNOW
5
THEY KNOW WE DONT KNOW
2
WE THEY
5
I KNEW THAT THEY KNOW
```

## Contoh Output

```
YES
YES
NO
NO
```

## Penjelasan

Ayat pertama dan kedua boleh dijejaki pada graf tersebut.  
Bagi ayat ketiga, “WE” tidak boleh diikuti dengan “THEY”.  
Bagi ayat keempat, “I” dan “KNEW” bukan perkataan yang sah.

Submit All Outputs

## Tasks

Task 1 (10/10 points)

Task 2 (10/10 points)

Task 3 (10/10 points)

Task 4 (10/10 points)

Task 5 (15/15 points)

Task 6 (15/15 points)

Task 7 (15/15 points)

Task 8 (15/15 points)

### Task 1 Input

```
10
10
KNOW THEY KNOW THEY DONT KNOW WE KNOW THEY KNOW
7
THEY KNOW WE DONT KNOW THAT THEY
9
ALONG KNEW DONT KNOW KNEW KNOW I KNOW THEY
7
THEY DONT KNOW WE DONT KNOM WE
```

Copy

### Output (not your code)

```
YES
YES
```

Submit

**Solved!**