Problem PA
Counterfeit Money

Time limit: 3 seconds
Memory limit: 1024 megabytes

Problem Description

The banknotes of the ICPC Kingdom have anti-counterfeiting measures. Each banknote has an exclusive serial number, and this serial number is divisible by 13. In other words, if the serial number is not divisible by 13, then the banknote is counterfeit. To verify whether a number is divisible by 13, we can directly divide the number by 13. Yet, there is another method:

Partition the digits of the given decimal number into groups starting from the right, where each group has three digits. Now, treat each group as a three-digit number. Then, from the rightmost group, apply subtraction and addition operations alternately to the three-digit number and obtain the result. If the result is divisible by 13, then the original number is divisible by 13. Otherwise, it is not.

For example, for the number 123,456,789, if we apply subtraction and addition operations alternately from the rightmost group of 3 digits, we get $789 - 456 + 123 = 456$. As 456 is not divisible by 13, the original number 123,456,789 is not divisible by 13.

For another example, for the number 593,825,856, if we apply subtraction and addition operations alternately from the rightmost group of 3 digits, we get $856 - 825 + 593 = 624$. As 624 is divisible by 13 ($624 = 13 \times 48$), the original number 593,825,856 is divisible by 13.

Based on the above method, write a program to verify whether a banknote is counterfeit or not.

Input Format

The input contains several test cases. The first line stands for the number of test cases t. The next t lines will each contain a positive number. The given number may contain up to 1000 digits.

Output Format

For each input number, output the absolute value of the result when we apply the above alternate-add-subtract method. Then, on the same line, output "`YES`" if the input number is divisible by 13, and "`NO`" otherwise. There is a space between the output value and `YES`/`NO`.

Technical Specification

- $1 \leq t \leq 1000$.
- Each input number may contain up to 1000 digits.

Sample Input 1

```
2
123456789
593825856
```

Sample Output 1

```
456 NO
624 YES
```