



Czech ACM Student Chapter
University of West Bohemia in Pilsen
Masaryk University
Pavol Jozef Šafárik University in Košice

Czech Technical University in Prague
Technical University of Ostrava
University of Žilina
Comenius University



CTU Open Contest 2026

Vampires

`vampires.(c|cpp|py), Vampires.(java|kt)`

Míša decided to stop being afraid of vampires. In his attic, he found triples of bats hanging upside down: two small ones and a large one in every triple. Each bat has a positive integer written on it. Míša wants to check whether the large bat is actually a vampire! The large bat is a vampire if and only if the integers on the three bats satisfy the conditions of *vampirism*.

Help Míša identify the vampires!

A natural number n (the number on the large bat) with $2k$ digits, $n = n_{2k}n_{2k-1} \dots n_2n_1$, is a *vampire number* with fangs a and b (the numbers on the small bats) if and only if:

- $n = a \cdot b$,
- a and b both have k digits: $a = a_k a_{k-1} \dots a_2 a_1$ and $b = b_k b_{k-1} \dots b_2 b_1$,
- at least one of a or b is not divisible by 10,
- the concatenation of the digits of a and b , $a_k a_{k-1} \dots a_2 a_1 b_k b_{k-1} \dots b_2 b_1$, is a permutation of the digits of n .

Input Specification

The first line of the input contains a single integer t ($1 \leq t \leq 1000$), the number of test cases. Each of the next t lines contains three integers n, a, b ($1 \leq n, a, b < 10^8$) describing a triple Míša found.

Output Specification

For each test case, output YES if n is a vampire number with fangs a and b , and NO otherwise.

Sample Input 1

```
4
1260 21 60
27 81 2187
1210 10 12
231495 345 671
```

Output for Sample Input 1

```
YES
NO
NO
NO
```