

## The Sacred Scroll Check

Time: 1s | Memory: 256 MB

### Problem Statement

In the ancient archives of Bhutan, monks preserve important records written on sacred scrolls. Each scroll contains a long number, which is used to verify whether the scroll is authentic or not.

Over time, some scrolls may get damaged or incorrectly copied. To protect the archive, the monks use a special checking method to decide whether a scroll is valid.

The checking process works as follows:

- Start from the **rightmost digit** of the number.
- Move left, and **double every second digit** (starting from the second last digit).
- If doubling a digit results in a number greater than 9, subtract 9 from it.
- Add all the digits after applying this process.
- If the total sum is divisible by **10**, the scroll is considered **AUTHENTIC**. Otherwise, it is **FORGED**.

Your task is to help the monks verify each scroll.

### Input Format

The first line contains an integer **N**, the number of scrolls.

The next **N lines each contain a string S**, representing a scroll number.

### Output Format

For each scroll, print:

- AUTHENTIC → if the scroll is valid
- FORGED → if the scroll is not valid

### Constraint

- $1 \leq N \leq 1000$
- $1 \leq \text{length of } S \leq 50$
- S contains only digits (0–9)

### Sample Input I

```
3
4532015112830366
8273123273520569
1234567812345670
```

**Sample Output I**

AUTHENTIC

FORGED

AUTHENTIC