Problem A
Defect Alarms

Input File: *testdata.in*
Time Limit: 1 second

Problem Description

Company A has several production lines. These production lines have a global timer for synchronization. Workers feed in raw materials into a mixer machine, and then the mixed material is dispatched to these production lines so as to yield products. Every product has a unique product number for quality control. A product number has three fields of the form *ppp-tttttttt-q*, where *ppp* is a three-digit number representing the production line, *tttttttt* is a seven-digit number representing the manufacture time (in seconds), and q is a single digit for indicating the quality of this product.

The product may have defects due to a malfunction of a machine or an incomplete mixture of the raw material. If a machine malfunctions, the defective rate of the production line containing this malfunctioning machine becomes high. On the other hand, once the raw material is not mixed well, the defective rates of all production lines rise. Write a program that reads a series of product numbers and outputs an alarm message instantly if one or both of the following two types of event occur.

- The first type of event is that the number of defective products yielded by a single production line in t_1 seconds is greater than or equal to k_1.
- The second type of event is that the total number of defective products yielded by all production lines in t_2 seconds is greater than or equal to k_2.

Technical Specifications

1. The three-digit number *ppp* for the production line is between 000 and 999.
2. The seven-digit number *ttttttt* for the manufacture time is between 0000000 and 9999999.
3. The single digit q for the quality indication is either 1 or 0, in which 1 represents no good and 0 represents good.
4. The number of defective products yielded by a single production line is less than 10000.
5. t_1 and t_2 are not small numbers.

Input Format

The first line of the input file contains an integer indicating the number of test cases. The first line of each case contains the five integers t_1, t_2, k_1, k_2, and N, which are separated by spaces. The first line is followed by N lines, where each line contains a single product number.

Output Format

For each test case, print a message on a different line. If a test case has any one or both of the two types of event, output the string ALARM; otherwise, output the string GOOD.

Sample Input

```
3
2 1 2 3 6
000-0000000-1
000-0000001-1
001-0000000-0
001-0000002-0
003-0000003-0
001-0000000-0
2 1 2 3 6
```

```
000-0000000-0
000-0000001-1
001-0000000-0
001-0000001-1
003-0000001-1
006-0000001-0
2 1 2 3 6
000-0000000-0
000-0000001-1
001-0000000-0
005-0000001-0
001-0000009-0
011-0000001-0
```

Sample Output

```
ALARM
ALARM
GOOD
```