

Dig Dog

Program Name: digdog.java

Input File: digdog.in

Bailey is a bad dog sometimes. Sometimes she doesn't always dig where her owner likes. Given a layout of the owner's yard, determine if Bailey has dug in a spot that would make the owner angry.

Input

The first line will contain a single integer n indicating the number of datasets. Each dataset will consist of 3 components:

1. The first line will contain a single integer m , representing the length and width of the yard.
2. The next m lines represent the layout of the yard, where each line contains m characters. A numeric character represents a spot that would make the owner angry if Bailey dug there. Acceptable digging spots are represented by periods ('.').
3. The next m lines represent the layout of the yard, where each line contains m characters. An "X" character represents a spot where Bailey dug.

Output

For each data set, if Bailey has dug in a spot that would make the owner angry, display the string "BAD DOG". Otherwise, display the string "GOOD DOG".

Example Input File

```
4
5
...1.
.2.1.
.22..
..2..
...3.
.....
..X..
X..XX
.....
...X.
3
.45
9..
..6
X..
.XX
XX.
2
12
34
..
..
2
12
34
XX
XX
```

Example Output To Screen

```
BAD DOG
GOOD DOG
GOOD DOG
BAD DOG
```