

D. 1-2-K Game

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Alice and Bob play a game. There is a paper strip which is divided into $n + 1$ cells numbered from left to right starting from 0. There is a chip placed in the n -th cell (the last one).

Players take turns, Alice is first. Each player during his or her turn has to move the chip 1, 2 or k cells to the left (so, if the chip is currently in the cell i , the player can move it into cell $i - 1$, $i - 2$ or $i - k$). The chip should not leave the borders of the paper strip: it is impossible, for example, to move it k cells to the left if the current cell has number $i < k$. The player who can't make a move loses the game.

Who wins if both participants play optimally?

Alice and Bob would like to play several games, so you should determine the winner in each game.

Input

The first line contains the single integer T ($1 \leq T \leq 100$) — the number of games. Next T lines contain one game per line. All games are independent.

Each of the next T lines contains two integers n and k ($0 \leq n \leq 10^9, 3 \leq k \leq 10^9$) — the length of the strip and the constant denoting the third move, respectively.

Output

For each game, print `Alice` if Alice wins this game and `Bob` otherwise.

Example

input

4
0 3
3 3
3 4
4 4

Copy

output


Bob
Alice
Bob
Alice

Copy

Educational Codeforces Round 68
(Rated for Div. 2)

Finished

Practice



→ Virtual participation

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Start virtual contest

→ Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++11 5.1.0

Choose file:

选择文件

 未选择任何文件

Submit

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Submission	Time	Verdict
57131891	Jul/16/2019 10:27	Accepted

→ Problem tags

games × math × *1700

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→ Contest materials

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