Problem 2. 2D Ball Game (1 point)

Timelimit: 1sec

Problem Statement

Two players A and B plays the ball game of pulling several balls from the pockets. We have two pockets, and each pocket contains x and y balls respectively.

During the game, they pick the ball alternatively according to the following rules.

- Player A plays first, and two players play alternatively.
- For each turn, a player pick a pocket to pull the ball.
- The player draw 1 to 3 ball(s) from the pocket. (at least 1, at most 3)

If some player cannot draw any ball from the any pocket, the player lose the game.

For example, if $x = 1$ and $y = 1$, then player B will win the game. In this case, player A should draw a ball from any pocket then, player B will draw a ball from the other pocket. Then player A cannot draw any ball, thus player A lose the game, and player B win the game.

Your task is to write a program that for given number of the balls, determine who will win the game, if both players play optimally.

For hint, if we play this game with only a pocket (1D ball game), you can always win if the number of ball is not $4n$ at your turn (n is arbitrary integer), or enemy can always win otherwise. If the number of balls is $4n + k(1 \leq k \leq 3)$, then you can always make it into $4n$, by removing k balls. Then the enemy will make the number of balls from $4n$ to $4(n-1) + k'(1 \leq k' \leq 3)$ or cannot draw ball if n is 0. Thus you can always win if the number of ball is not $4n$ at your turn. (This is alternative version of Beskin Robbins 31 game that you usually played in some days. The difference is that in BR 31 game, you will lose when you call 31, but in this game, you will win.)

Input Statement

The first line of input contains t which is the number of test cases. ($t \leq 1,100,000$)
Each Following t lines contains two integers x and y, which is the number of balls in two pockets respectively ($0 \leq x, y \leq 1,000$).

Output Statement

For each test case, print "A" if the first player can win the game, and "B" otherwise.

Input Example

```
5
1 1
1 5
4 5
5 5
1 4
```

Output Example

```
B
B
A
B
A
```