Problem 2. 2D Ball Game (1 points)

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.

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

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, A should draw a ball from any pocket then, B will draw a ball from the other pocket. Then A cannot draw any ball, thus A lose the game, and 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 efficiently.

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.

Input Statement

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
```