Problem A
Cake Game
Max no. of test cases: 10
Time limit: 1 second

On a birthday cake, four red candles and four green candles are placed. The boys and the girls in the party come up with a game to play. The girls play first and draw a line by connecting two red candles of their choice. The boys play next and must draw two non-intersecting lines, each connecting two green candles. Each candle can only be used once. If the boys can successfully draw two non-intersecting lines without crossing the line drawn by the girls, the boys win the game, if not the girls win.

In the example given in Fig. 1, the circles are the red candles and the triangles are the green candles. In this example, no matter how the girls connect the red candles, the boys can always find a way to draw two lines to connect the green candles to win the game.

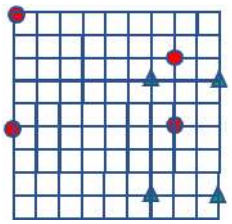

Figure 1: Boys can always win the game regardless of how girls play the game.

In Fig. 2, if the girls draw the dash line first, then the boys will have no mean to draw two lines without crossing the dash line. Therefore, girls win this game.

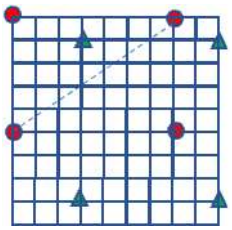

Figure 2: Boys cannot always win the game.

Given the positions of the 4 red candles and 4 green candles, please determine whether these is a way for girls to draw the first line so that boys cannot win the game.

Input File Format

The first line of the input contains one integer denoting the number of test cases to follow. For each test case, there are 2 lines. First line contains 8 integers, which are

x, y coordinates of the 4 red candles. The second line contains 8 integers, which are x, y coordinates of the 4 green candles. The coordinates are integers between 0 and 9, $0 \leq x, y \leq 9$. Obviously, no two candles will be placed at the same position.

Output Format

Output "G" if there is a way for girls to draw the first line to win the game. If not, output "B", if boys can always win the game no matter how the girls draw the first line.

Sample Input

```
3
0 0 7 0 0 5 7 5
6 3 9 3 6 8 9 8
0 0 7 0 0 5 7 5
3 1 9 1 3 8 9 8
0 0 0 2 2 0 2 2
4 4 4 6 6 4 6 6
```

Output for the Sample Input

```
B
G
B
```