

### Day 74 coding Statement :

You have a grid with  $N$  rows and  $M$  columns. You have two types of tiles — one of dimensions  $2 \times 2$  and the other of dimensions  $1 \times 1$ . You want to cover the grid using these two types of tiles in such a way that:

- Each cell of the grid is covered by exactly one tile; and
- The number of  $1 \times 1$  tiles used is minimized.

Find the **minimum** number of  $1 \times 1$  tiles you have to use to fill the grid.

### Input Format

- The first line of input will contain a single integer  $T$ , denoting the number of test cases.
- Each test case consists of a single line containing two space-separated integers  $N, M$ .

### Output Format

For each test case, print on a new line the minimum number of  $1 \times 1$  tiles needed to fill the grid.

### Sample Input

4

1 1

4 5

6 8

3 2

### Sample Output

1

4

0

2

```
import java.util.Scanner;

public class RatanPrajapati_day74 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int T = sc.nextInt();
        while (T-- > 0) {
            int ans = 0;
            int N = sc.nextInt();
            int M = sc.nextInt();
            if (M % 2 == 0 && N % 2 == 0) {
                ans = 0;
            } else if (M % 2 == 0 && N % 2 != 0) {
                ans = M;
            } else if (M % 2 != 0 && N % 2 == 0) {
                ans = N;
            } else {
                ans = M + N - 1;
            }
            System.out.println(ans);
        }
    }
}
```