

Interesting Game

Our great programmer Moshiur Rahman invented a new interesting game named 'Katti Kutti'.

The rule of the game:

1. Initially you have some number(s).
2. In one step you can turn all EVEN number(s) into zero "0".
3. In one step you can add 1 with all the ODD number(s).
4. You have to do the same things until all number(s) turn into zero.

You're playing this game (You're perfect player for this game). You've to finish the game as soon as possible that you've to finish the game with minimum number of step(s). So you're asking help to the inventor of the game.

Now you've to print the number the inventor said. Don't worry if the number is wrong it's not your fault it is the fault of the inventor 😊.

INPUT: Input starts with $t \leq 100$, denoting the number of test case. Each case starts with $n \leq 10^5$. Then n non negative space separated integer not greater than 2^{32} .

OUTPUT: For each case print the minimum number of step(s).

SAMPLE:

| INPUT | OUTPUT |
|------------|--------|
| 1 | 1 |
| 5 | |
| 2 4 6 8 10 | |

There is no odd number so you can turn all number into zero in 1 step.

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