

时间限制：C/C++/Rust/Pascal 2秒，其他语言4秒  
空间限制：C/C++/Rust/Pascal 512 M，其他语言1024 M  
Special Judge, 64bit IO Format: %lld

题目描述

Binary army ants are preparing for a cruel war, but things become more complicated than they thought.

There are  $n$  ants in the squad. Originally, each army ant  $i$  ( $1 \leq i \leq n$ ) has its power  $a_i$ .

However, it turns out something strange will happen during the war: a random pair  $(i, j)$  ( $1 \leq i < j \leq n$ ) will be chosen, and the ant  $i$  and the ant  $j$  will disappear, and a new ant with power  $a_i \oplus a_j$ , which is the **bitwise exclusive OR (XOR)** of  $a_i$  and  $a_j$ , will magically appear.

This kind of thing is so rare that it happens at most once throughout the war.

The ants think the total strength of the whole squad is  $\sum_{i=1}^n 2^{a_i}$ , and the squad is called **bitwise perfect** if the event above could never decrease its strength.

Too busy practicing, ants don't have enough time to check whether the squad is bitwise perfect. Can you help them with this? There can be  $T$  squads.

输入描述:

Each test contains multiple test cases. The first line contains the number of test cases  $T$  ( $1 \leq T \leq 10^5$ ).

Each test case consists of two lines.

The first line contains one integer  $n$  ( $2 \leq n \leq 5 \times 10^5$ ), the number of ants in the squad.

The second line contains  $n$  integers  $a_1, a_2, \dots, a_n$  ( $1 \leq a_i \leq 10^{18}$ ), the power of each ant.

It is guaranteed that  $\sum n$  over all test cases in one test will not exceed  $5 \times 10^5$ .

输出描述:

For each test case, output "YES" if the squad is **bitwise perfect** and "NO" otherwise. You can print the answer in any case.

示例1

C++ (clang++18)

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ACM模  
请通过  
入输出  
出描述

运行结果 自测