Problem A : Hardest Problem

You are given three non-negative integers x, y, and z. Determine whether there exist three non-negative integers a, b, and c satisfying the following three conditions:

$$a\&b = x$$

$$b\&c = y$$

$$a\&c = z$$

where $\&$ denotes the bitwise AND operation.

Input

Each test contains multiple test cases. The first line contains the number of test cases t ($1 \leq t \leq 10^4$). The description of the test cases follows.

The first and only line of each test case contains three integers x, y, and z ($0 \leq x, y, z \leq 10^9$) — the target values of $a\&b$, $b\&c$, and $a\&c$, respectively.

Output

For each test case, output "YES" if there exist three non-negative integers a, b, and c satisfying the above conditions, and "NO" otherwise.

Example

Standard Input	Standard Output
5 1 1 1 3 2 6 4 8 12 9 10 12 12730 3088 28130	YES YES NO YES NO

Note

In the first test case, $a = 3$, $b = 5$, and $c = 9$ satisfy the conditions since $3\&5 = 1$, $5\&9 = 1$, and $3\&9 = 1$.

In the second test case, $a = 7$, $b = 3$, and $c = 22$ satisfy the conditions since $7\&3 = 3$, $3\&22 = 2$, and $7\&22 = 6$.

In the third test case, it can be proven that there are no three non-negative integers a, b, and c such that $a\&b = 4$, $b\&c = 8$, and $a\&c = 12$.