RBG Queries



A RBG color is formed by adding different intensities of Red, Blue and Green Colors. So, any RBG color can be represented in the form of a triplet (r, b, g) where r is intensity of red color, b denotes is of blue color and g is intensity of green color.

You have been given n colors, where each color has the intensities of red, blue and green color as (r_i,b_i,g_i) . You can make new colors by mixing a subset of these colors. So, if you mix the colors

 $(r_1,b_1,g_1),(r_2,b_2,g_2),\cdots,(r_k,b_k,g_k)$ you would get a color having respective intensities of red, blue and green as $(max(r_1,r_2,\cdots r_k),max(b_1,b_2,\cdots b_k),\cdots,max(g_1,g_2,\cdots g_k))$.

For example, mixing colors (4,2,3), (5,1,1) and (0,0,6) would give color (5,2,6).

You have been asked q queries, where in each query you need to answer whether is it possible to obtain a color (x,y,z) by mixing the given colors.

Note: that you may mix any number of colors (possibly one) to make the required color.

Input Format

The first line of input contains two space separated integers n and q.

The next n lines of input contains three space separated integers r_i, b_i and g_i denoting the respective intensities of red, blue and green in the i^{th} color.

The next q lines of input contains three space separated integers x, y and z denoting the respective intensities of red, blue and green color required.

Constraints

- $1 \le n, q \le 10^5$
- $0 \le r_i, b_i, g_i, x, y, z \le 10^5$

Output Format

For each query print a single line containing "YES" if it is possible to obtain the given color, else print "NO".

Sample Input 0

```
2 2
1 3 5
5 3 1
5 3 5
3 3 3
```

Sample Output 0

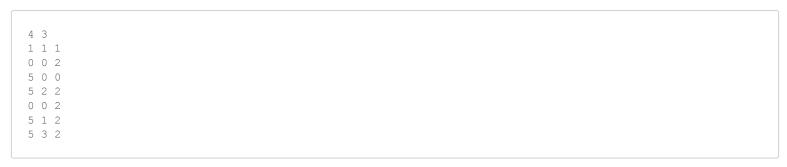
```
YES
NO
```

Explanation 0

For the first query, we can mix both the given colors to get (5,3,5)

For the second query, there's no way to acheive the given color.

Sample Input 1



Sample Output 1

```
YES
YES
NO
```

Explanation 1

For the first query, we need not mix any color as the 2^{nd} color is the required color.

For the second query, we have to mix the first 3 colors, i.e. (1,1,1), (0,0,2) and (5,0,0) to obtain the given color.

For the second query, there's no way to acheive the given color.