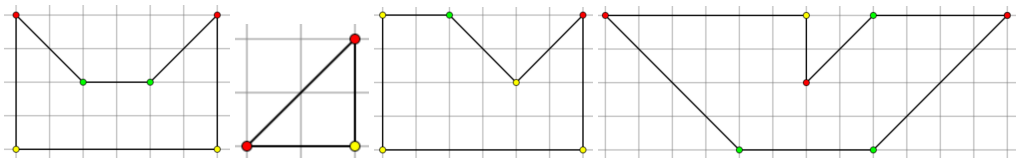
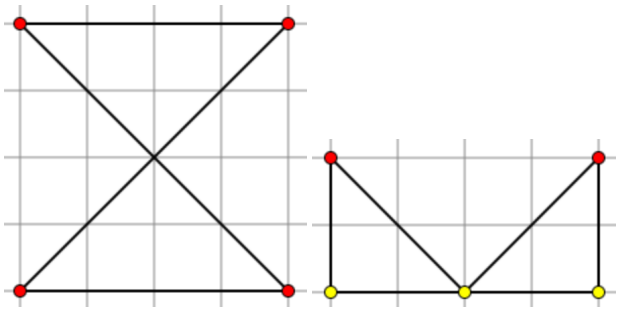
Problem Sàimă chăng

Input file	`stdin`
Output file	`stdout`

For the purposes of this problem, a racetrack can be represented as a non-intersecting (possibly concave) polygon.



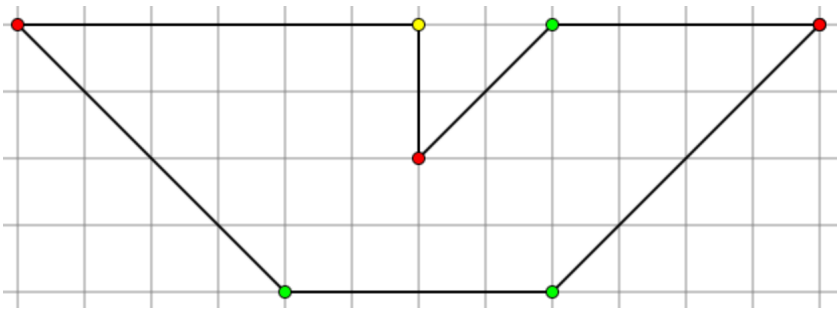
Non self-intersecting polygons



Self-intersecting polygons

In a racetrack, corners are split into three categories:

- Slow speed corners (either the corresponding interior or exterior angle is equal to exactly $45°$).
- Medium speed corners (either the corresponding interior or exterior angle is equal to exactly $90°$).
- High speed corners (either the corresponding interior or exterior angle is equal to exactly $135°$).



For example, this racetrack has 3 slow speed corners (red), 1 medium speed corner (yellow) and 3 high speed corners (green).

You are given three integers a, b and c. Print any *semiaxis-aligned* polygon corresponding to a racetrack which has exactly a slow speed corners, b medium speed corners and c high speed corners (and no other types of corners). If no such polygon exists, print `NO` instead.

In this problem, a polygon is called *semiaxis-aligned* if every one of its edges is parallel to at least one of the following lines:

- $y = 0$ (the Ox axis)
- $x = 0$ (the Oy axis)
- $x = y$
- $x = -y$

Input

This problem has exactly one test, which contains multiple test cases. For additional information, please check the restrictions section of this statement.

The first line of input containts a single integer T ($T = 1\,000$) - the number of test cases.

The first (and only) line of each test case contains three integers a, b and c - the number of slow speed, medium speed, and high speed corners, respectively.

Output

For each test case, if there is no polygon satisfying all of the constraints, print `NO`.

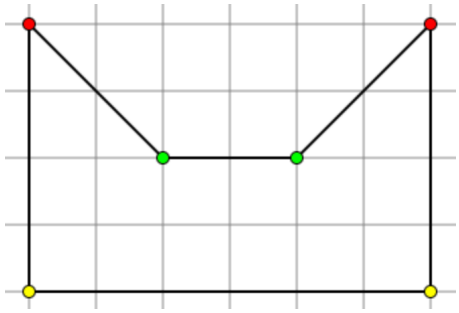
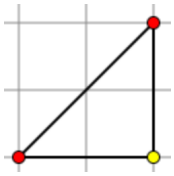
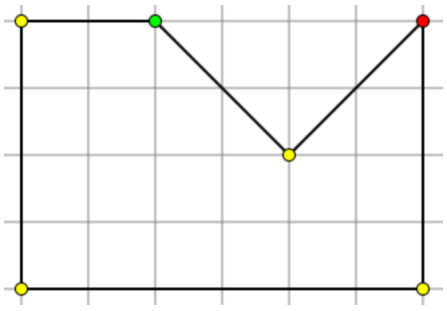
Otherwise, print `YES`, followed by the coordinates of the $a + b + c$ vertices of any polygon which satisfies the given constraints. **Note that the absolute value of the coordinates must be at most** 10^9.

Restrictions

- **This problem has exactly one test**, which has $T = 1\,000$. Each test case is scored independently and is worth 0.1 points. Note that **if the output format is incorrect, the score for your submission will be** 0 **points**.
- The output format is considered incorrect if, for example, the coordinates of the polygons' vertices exceed 10^9 by absolute value, the number of vertices is incorrect, or if the first line of a testcase is neither `YES` nor `NO`.
- Outputting `NO` for a test case where an answer exists or outputting an incorrect polygon with the correct number of vertices will **not** be considered as invalid format.
- For all test cases, $0 \leq a, b, c \leq 100$, $a + b + c \geq 3$

#	Points	Restrictions
1	100	No additional restrictions.

Examples

Input file	Output file	Explanations
6 6 4 5 4 0 0 2 2 2 2 1 0 1 4 1 3 1 3	NO NO YES 0 0 3 0 3 2 2 1 1 1 0 2 YES 0 0 1 0 1 1 YES 0 0 3 0 3 2 2 1 1 2 0 2 YES 0 0 2 0 4 2 2 2 1 1 1 2 -2 2	We can show that no corresponding polygons exist for the first two test cases. A possible polygon for the third test case:  A possible polygon for the fourth test case:  A possible polygon for the fifth test case:  A possible polygon for the sixth test case: