Problem A. Point Location Test

Time limit 1000 ms
Mem limit 524288 kB

There is a line that goes through the points $p_1 = (x_1, y_1)$ and $p_2 = (x_2, y_2)$. There is also a point $p_3 = (x_3, y_3)$.

Your task is to determine whether p_3 is located on the left or right side of the line or if it touches the line when we are looking from p_1 to p_2.

Input

The first input line has an integer t: the number of tests.

After this, there are t lines that describe the tests. Each line has six integers: x_1, y_1, x_2, y_2, x_3 and y_3.

Output

For each test, print "LEFT", "RIGHT" or "TOUCH".

Constraints

- $1 \le t \le 10^5$
- $-10^9 \le x_1, y_1, x_2, y_2, x_3, y_3 \le 10^9$
- $x_1 \neq x_2$ or $y_1 \neq y_2$

Sample

Input	Output
3 1 1 5 3 2 3 1 1 5 3 4 1 1 1 5 3 3 2	LEFT RIGHT TOUCH