# Shooting rectangles

(Time Limit: 2 seconds)

**Problem Description**

There are N targets on the plane, and we want to shoot all the targets by minimum number of shoots. Each target is a rectangle which can be specified by a 4-tuple (x1,y1,x2,y2) such that the rectangle contains all points in the set   
 {(x,y) | x1≦x≦x2 and y1≦y≦y2 }.  
Any shoot must be a straight line passing through the origin (0,0), and a target is shot if the line intersects the target, i.e., the line and the rectangle share at least one point. The goal of this problem is to determine the minimum number of shoots such that every target will be shot at least once.

**Technical Specification**

* + The number of test cases is at most 9.
  + For each test case, the number of rectangles N, 1≤ *N* ≤ 100000.
  + All X-coordinates are integers between 0 and 30000. All Y-coordinates are integers between -30000 and 30000.

**Input Format**

The first line of the input file contains an integer indicating the number of test cases. Then, the test cases are given one by one. Each test case starts with a line containing the number N of rectangles in the case. Each of the next N lines specifies a rectangle. A rectangles is given by four integers x1, y1, x2, y2, and there is a space between two integers.

**Output Format**

For each test case, output the minimum number of shoots in one line.

**Example**

|  |  |
| --- | --- |
| **Sample Input:** | **Sample Output:** |
| 2  4  0 -20 10 -10  10 -9 20 10  5 10 10 20  0 20 4 30  5  0 -20 10 -10  10 -10 20 10  5 10 10 20  4 20 5 21  0 21 50 25 | 2  2 |