

GEOMETRY (1)

Time limit: 2000 MS

Memory Limit: 256 MB

Problem statement:

We have two lines on a 2D Cartesian plane. These lines are labeled as AB and CD where first line goes through points A and B and second one goes through C and D. We are interested to know answers of the following three questions:

- 1) Are these parallel or same line?
- 2) Do these intersecting?
- 3) Are these perpendiculars?

You are given the four points A, B, C, D . Answer all three question mentioned above.

Input format:

There are multiple test cases. Each test case consists of four lines. Each line contains two **integers** representing a point on Cartesian plane. Sequence of points are A, B, C, D.

Output Format:

For each test case output in the following format:

Case \$X: ans1 ans2 ans3

Where “X” will be replaced by case number starting from **0**. “ans1” , “ans2”, “ans3” will be either “yes” or “no” (without the quote).

Sample Input	Sample Output
0 0	Case \$0: yes no no
5 0	Case \$1: no yes yes
1 1	Case \$2: no yes no
5 1	
0 0	
5 0	
-1 -1	
-1 1	
0 0	
5 0	
-1 -1	
1 1	

Limit:

0 ≤ Values of X co-ordinate and Y co-ordinate < **2³¹-1**