Given 4 points of the form **(xi, yi)** in 2D plane, find out if the lines formed by **(x1, y1), (x2, y2)** and **(x3, y3), (x4, y4)**are perpendicular to each other.

**NOTE:**

* It is **NOT** provided that the points are distinct i.e the first two or the last two points **may be equal** too!

INPUT FORMAT:

First line **T** is the number of test cases. Each test case is followed by **2** lines.

The first line of every test case contains four integers **(x1, y1)** and **(x2, y2)**.

The second line contains four integers **(x3, y3)** and **(x4, y4)**.

OUTPUT FORMAT:

For every test case :

* print "YES" without quotes if the lines are perpendicular to each other
* print "NO" without quotes if the lines are not perpendicular
* print "INVALID" without quotes if there are less than 2 lines

CONSTRAINTS:

1 <= **T** <= 10^5

-10^18 <= **xi** <= 10^18

-10^18 <= **yi** <= 10^18

**SAMPLE INPUT**

4

1 2 3 3

3 3 1 7

3 4 8 9

13 5 13 5

5 7 12 9

1 5 9 15

7 9 10 12

10 14 17 21

**SAMPLE OUTPUT**

YES

INVALID

NO

NO

**Explanation**

**First Test case ->**

Slope of first line = 0.5

Slope of Second line = -2

Produce of Slopes = -1

Hence they are perpendicular! Answer is "**YES**".

**Second Test Case ->**

The Second line is not formed. Hence the answer is "**INVALID**"

**Time Limit:**1.0 sec(s) for each input file.

**Memory Limit:**256 MB

**Source Limit:**1024 KB

**Marking Scheme:**Marks are awarded when all the testcases pass.

**Allowed Languages:**C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript), Racket, Ruby, Rust, Scala, Swift, Swift-4.1, Visual Basic

#include <bits/stdc++.h>

using namespace std;

int main()

{

int t;

double x1,x2,x3,x4,y1,y2,y3,y4;

cin>>t;

while(t--)

{

cin>>x1>>y1>>x2>>y2;

cin>>x3>>y3>>x4>>y4;

if(((x1==x2)&&(y1==y2)||(x3==x4)&&(y3==y4)))

cout<<"INVALID"<<endl;

else if(y1==y2&&x4==x3)

cout<<"YES"<<endl;

else if(y3==y4&&x1==x2)

cout<<"YES"<<endl;

else if(((y2-y1)/(x2-x1))==-((x4-x3)/(y4-y3)))

cout<<"YES"<<endl;

else

cout<<"NO"<<endl;

}

return 0;

}