
11. Walk the Line

Program Name: Walkline.java

Input File: walkline.dat

Given four distinct points on a coordinate plane determine the number of unique lines that pass through the points.

The answer will be either 1, 4 or 6.

- The answer is 1 if all 4 points are collinear.
- The answer is 4 if 3 of the points are collinear and the 4th is not, in which case the 4th forms 3 more lines with the 3 collinear points.
- The answer is 6 if no more than 3 points are collinear. All 6 pairs of points form a unique line.

Input

- The first line will contain a single integer n that indicates the number of data sets that follow.
- Each data set will consist of a single line:
 - Each line will consist of 8 integers. These are the 4 pairs of points for the data set.
 - Each pair of integers represent the x and y coordinate of one point in the data set.
 - All points in data set will be distinct.
 - All coordinates of points will be greater than or equal to -1000 and less than or equal to 1000

Output

Print out the number of lines that pass through the points in the data set.

Example Input File

```
3
5 5 6 6 -3 -3 7 7
3 0 1 1 -5 0 2 0
0 0 5 5 0 5 5 0
```

Example Output to Screen

```
1
4
6
```