ECOO '15 R2 P4 - Rectangle Roundup

Time limit: 13.0s **Memory limit:** 64M

You have been given a set of rectangular and square tiles. Your job is to try and put this set of tiles together to form larger rectangles. The rectangles must be completely filled in. They can't be hollow and they can't contain any holes. You have to use all of the tiles you have been given for each larger rectangle you form.

The input will contain 10 test cases. The first line of each test case will consist of a single integer N on a line by itself $(1 \leq N \leq 10)$. This will be followed by N lines, each containing two integers S_1 and S_2 representing the two side lengths of one of your tiles in centimetres $(1 \leq S_1, S_2 \leq 5)$. The total area of all the tiles combined for each test case will be no more than 30 square centimetres.

For each test case you should output a single integer representing the largest perimeter it is possible to create with the tiles when you make rectangles following the rules set out above. If it is not possible to create any rectangles with the tiles you have been given, you should output the words `Not Possible` with both words capitalized.

Note that the sample input below only contains 3 test cases, but the real data files will contain 10.

Sample Input

```
3
3 2
2 2
1 2
4
1 1
1 1
1 1
1 1
3
3 2
1 1
1 3
```

Sample Output

```
16
10
Not Possible
```

Question Development Team

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