

Competitive Programming SS24

Submit until end of contest



Problem: 23o5 (1.0 second timelimit)

Your task is to write a program that can decide whether you can find an arithmetic expression consisting of 5 given numbers a_i , $1 \leq i \leq 5$ that will yield the value 23.

For this problem we will only consider arithmetic expressions of the following form:

$$(((a_{\pi(1)} o_1 a_{\pi(2)}) o_2 a_{\pi(3)}) o_3 a_{\pi(4)}) o_4 a_{\pi(5)}$$

Where $\pi : \{1, 2, 3, 4, 5\} \rightarrow \{1, 2, 3, 4, 5\}$ is a bijective function (permutation) and $o_i \in \{+, -, \cdot\}$ for $i \in \{1, 2, 3, 4\}$.

Input The first line contains the number of testcases $1 \leq t \leq 1000$. Each of the next t lines contains five integers between 1 and 50.

Output For each testcase, print `Possible` on a single line if there exists an arithmetic expression as described above that yields 23. Otherwise, print `Impossible`.

Sample input

```
3
1 1 1 1 1
1 2 3 4 5
2 3 5 7 11
```

Sample output

```
Impossible
Possible
Possible
```