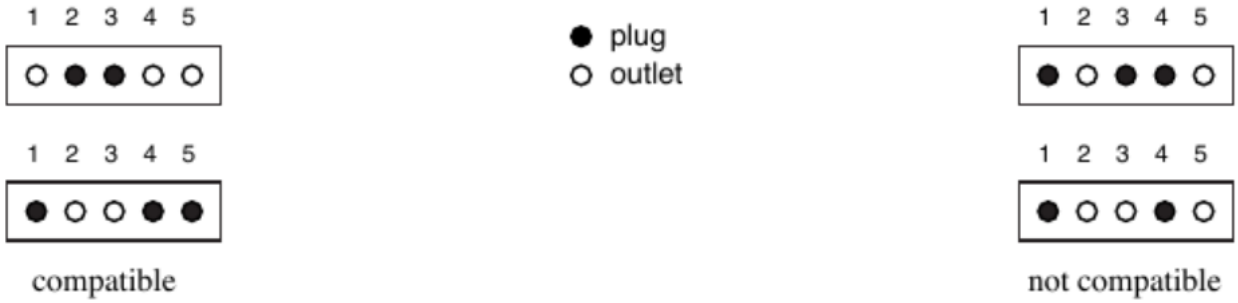
The Internet Computer Parts Company (ICPC) is an on-line shop that sells computer parts. Pai of in-line electrical connectors are among the most popular parts that ICPC sells. However, they a also one of the parts that are returned more often by unsatisfied customers, because due to errors packaging the connectors sent to the costumers may not be *compatible*.

An in-line connector is composed of five connection points, labelled from 1 to 5. Each connecti point of a connector can be either a plug or an outlet. We say two connectors are *compatible* if, f every label, one connection point is a plug and the other connection point is an outlet (in other word two connectors are compatible if, for every connection point with the same label, a plug and an outl meet when the two connectors are connected).

The figure below shows examples of two connectors that are compatible and two connectors th are not compatible.



ICPC is introducing a state-of-the-art Automated Checking Machine (ACM), with an optic checker, which will verify whether the two connectors packaged for a customer are indeed compa ble. The complex and expensive hardware of the ACM is ready, but they need your help to finish t software.

Given the descriptions of a pair of in-line connectors, your task is to determine if the connectors a compatible.

Input

The input contains several test cases; each test case is formatted as follows. The first line contains fi integers X_i ($0 \leq X_i \leq 1$ for $i = 1, 2, \ldots, 5$), representing the connection points of the first connect in the pair. The second line contains five integers Y_i ($0 \leq Y_i \leq 1$ for $i = 1, 2, \ldots, 5$), representing t connection points of the second connector. In the input, a '0' represents an outlet an a '1' represen a plug.

Output

For each test case in the input, output a line with a character representing whether the connectors a compatible or not. If they are compatible write the uppercase letter 'Y'; otherwise write the upperca letter 'N'.

Sample Input

```
1 1 0 1 0
0 0 1 0 1
1 0 0 1 0
1 0 1 1 0
```

Sample Output

```
Y
N
```