This problem relates the digits 3, 2, 1 and 0. Everyone knows that binary numbers are built of `1`'s and `0`'s. Now suppose that you are given N cards of 3 and M cards of 2. Is it possible to pick K cards out of them to build a K-digit decimal number such that all the K least significant digits of its binary representation are zeros?

For example, if you are given one card of each type, you can form the number 32, whose binary representation 100000 ends with ≥ 2 zeros. However, if both cards have the same value, you cannot form a 2-digit number that satisfies the requirement.

Input

Input contains no more than 1000 test cases, each given in a line with three non-negative integers N, M and K. All input numbers are smaller than 1000.

Output

For each test case, output the **smallest** satisfying K-digit number if found, or '`Impossible.`' otherwise.

Sample Input

```
1 1 2
2 0 2
```

Sample Output

```
32
Impossible.
```