

Problem 5. Chicken Nuggets

Time limit: 10 seconds
Memory limit: 256 megabytes

Steven wants to order some chicken nuggets from McTartan's, CMU's famous fast food restaurant. Steven is very particular, and wants to get exactly n nuggets. Nuggets at McTartan's come in k different order sizes. However, McTartan's charges a flat fee for every order of nuggets, so Steven also needs to minimize the total number of orders. Help Steven figure out the minimum number of orders he can make so that he gets exactly n chicken nuggets.

Input

The first line of input consists of two integers, n, k , with $1 \leq n \leq 10^4$ and $1 \leq k \leq 1000$. The next line contains k unique integers, each between 1 and 1000, representing the possible order sizes.

Output

Output a single integer, the minimum number of orders needed to get exactly n nuggets. If it is not possible to get n nuggets, output the string "Impossible".

Examples

standard input	standard output
28 3 4 10 20	3
25 2 2 4	Impossible