



The 2021 ICPC Greater NY Regional Contest

O · Transporting Spaghetti

The unique location of Venice in northeastern Italy poses a shipping problem in many cases due to the canals and whatnot. To transport large quantities of spaghetti from Milan to Venice, a company uses trucks capable of carrying **A** tons from Milan to Mestre, the city on the mainland closest to Venice, and boats capable of carrying **B** tons from Mestre to Venice. One day, the depot in Venice requests an arbitrary amount of spaghetti, but not less than **C** tons and the depot in Mestre requests exactly **D** tons. Write a program to determine the *smallest* number of trucks to be sent from Milan to satisfy both orders such that every truck and boat used for the transport is loaded to capacity.

Input

There is a single line of input containing the four integers, **A**, **B**, **C** and **D**. ($0 < A \leq 100$), ($0 < B \leq 20$), ($0 \leq C \leq 100$), ($0 \leq D \leq 100$).

Output

The single output line consists of the sentence: **We need *t* trucks and *b* boats.** Where ***t*** is the number of trucks required and ***b*** is the number of boats required. If ***t*** or ***b*** is 1, then you should not pluralize the words “truck” or “boat” respectively. If there is no solution that meets the criteria, output: **No solution.**

Sample Input	Sample Output
31 13 50 28	We need 3 trucks and 5 boats.

Sample Input	Sample Output
100 20 30 10	No solution.

Sample Input	Sample Output
1 1 1 100	We need 101 trucks and 1 boat.