Arithmetic Progression Subsequences (2)   X55634_en

Write a program that reads an integer $n > 1$ followed by a sequence of integers, and finds out whether the sequence contains a consecutive subsequence of length n that forms an arithmetic progression.

A consecutive subsequence of integers forms an arithmetic progression if the difference between two consecutive numbers equals a fixed integer value r. For instance, 4567 is an arithmetic progression with $r = 1$, and 2233445566 is an arithmetic progression with $r = 11$.

If the input sequence contains such a progression, the program must report the start number and the value r. Otherwise, the program must indicate "*No arithmetic progression of length n found*".

Input

The input is an integer $n > 1$, followed by a sequence of integers containing at least 2 elements.

Output

If a progression subsequence of length n exists, the output is the first element of the subsequence and the value of r. Otherwise, the output is "*No arithmetic progression of length n found*".

Problem information

Author: ProAl

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