Q2 (20 Marks) There are N gas station numbered 0 to N-1. Each gas station has X liters of petrol and is D miles away from the next station. Assume the following.

- Your super-car, because of huge engine, consumes 1 liter of petrol for every mile travelled.
- Your car can store unlimited amount of petrol.
- You can travel only in one predefined sequence, that is - from a station j to station j+1 where $0 \leq j \leq N-2$, and from station N-1 to station 0.

Identify the starting gas station from where you can complete the journey through every gas station. If there are more than one such starting stations, answer the one with the smallest station number.

INPUT

LINE 1: The value of N, an integer, $N \leq 100000$
LINE 2: N integers, each separated by one space. Each integer is the amount of petrol in the corresponding station.
LINE 3: N integers, each separated by one space. Each integer is the distance to the next station, in miles. The last integer is the distance from station N-1 to station 0.

OUTPUT

The smallest start station number that you can complete the journey.

EXAMPLE

INPUT	OUTPUT
6 3 5 3 8 3 6 4 7 4 8 4 1	5
10 3 7 1 10 1 3 1 7 10 6 7 4 5 5 2 2 6 2 8 1	3