**Problem Statement**

Bob is a grizzy bear and just lika all grizzlies he loves hunting salmon fish. Bob has a strategy for cating salmons. He stands at the edge of the river and waits for the fishes to cross him. Whenever a fish comes in the same line as that of Bob. he catches it.  
For the sake of the problem assume the river is flowing fromm left to right and bob is currently sitting at **x-coordinate = 0**(origin). Alll the fishes are swimming with the river’s flow at a uniform speed of 1 from left to right. The x-coordinates increases as we move rightwards in the river and decreases as we move leftwards. **initially all the fishes has a non-positive x-coordinates.**  
YOu are given the information about **N** salomons in the two arrays len and **time**, where len[i]=length of the ith salmon and time[i] = time at which the head of the ith salmon reaches the x-coordinate = 0 (origin). So, at any time T, the ith salmon has its head at x-coordinate = T-time[i] and tail at x-coordinate = T- time[i] - len[i].

At any point of the time Bob can catch all the salmons whose any part of body(between head and tail, both inclusive) is at origin.  
**Bob wants to catch salmons no more than twice**. What is the maximum number of salmons Bob can catch?

**Input format.**

1st line - **N**- number of salomon  
2nd line - contains N separated integers representing the contents of array **len**.  
3rd line - contains N separated integers representing the contents of array **time**.

**Output format**

An integer representing the maximum nu,number of salmons Bob can catch.

**Example**

**Input**

5

2 4 4 2 4

1 4 1 6 4

**Output**

5

**Explanation**

at time=1 and time=6 bob can get 5 salomons