Mehak loves Bananas

Input file: standard input
Output file: standard output

Time limit: 2 second

Memory limit: 256 megabytes

Mehak loves bananas, and so does her brother. They have many bags of bananas lined up at home. Mehak can eat a whole bag of bananas in a single day. Now, she wants to eat the maximum amount of bananas, but she doesn't want her brother to know about this. Mehak thinks that if she does not eat any consecutive bag of bananas, her brother will not notice. Can you help Mehak know what is the maximum number of bananas she can eat over an infinite number of days so that her brother does not notice?

Input

The first line contains a single integer (N) - the number of bags of bananas. The second line contains N integers - the number of bananas in each bag.

 $1 \le N \le 20$

 $1 \le number \ of \ bananas \ in \ a \ single \ bag \ \le 10^5$

Output

Output one integer - the maximum number of bananas Mehak can eat.

Example

standard input	standard output
4 1234	6
4 10 3 4 20	30