



Chocolate eating contest

- Time limit: 1 second
- Memory limit: 256 MB

A number of chocolates are placed in a row on a table. At each stage, Ricky and Morty take turns to pick up and eat one of the chocolates at the beginning or end of the table. Reiki starts first. Each chocolate has a "delight", which is an integer. Ricky and Morty each want to maximize their total pleasure.

What is the maximum amount of pleasure Ricky can get? (Assume that Ricky and Morty operate optimally.)

Input

In the first line of the input n is said that it specifies the number of chocolates.

$$1 \leq n \leq 5000$$

In the next line a_i There is an integer that describes the pleasure of each chocolate.



▼ Questions

100

Chocolate eating contest

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A short story: Arash,
Mehdi and Chocolate

All submissions

Final submissions

$$-10^9 \leq x_i \leq 10^9$$

Output

Print the maximum amount of pleasure Ricky can get.

Example

Sample input 1

```
4
4 5 1 3
```

Sample output 1

```
8
```

POST AN ANSWER TO THIS QUESTION

.The training period is over



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