Stock Broker

As a stock broker, Bob lives a busy life. By buying in and selling out the stocks, he made a lot of money. The secret is to accurately predict the stock price. Well, this is rather difficult.

One day, Bob figured out the stock movements in the next few months. He made millions of dollars in the following way: he picked out one month to buy in and then choose another later month to sell out. Given the predicted price of stocks in each month, how much money would he make if he just bought in and sold out one share of stock?

Input

Input contains multiple test cases and is terminated by end of file. The first line of each test case contains an integer **n**, the number of months in which Bob figured out the stock prices. ($2 \leq \mathbf{n} \leq 10000$).The following line contains **n** integers, the **i-th** integer is the price of the stock in the **i-th** month by Bob's prediction, the integer will not be bigger than 2^{31}-1.

Output

For each test case, print the maximum possible amount of money that Bob would make if his prediction is correct, in a separate line. If the profit is below zero, then print QUIT.

See the case in the example.

Sample Input

5

2 1 4 7 1

4

4 3 2 1

4

4 3 2 2

Sample Output

6

QUIT

0

Hints

In the first example, the best strategy is to buy in at the second month, and sell out at the fourth month. Then the profit will be:

Profit = 7-1 = 6

In the second example, any strategy will makes the profit negative, print QUIT.