

### Problem description

Rhithick is an expert in stock trading so much that he can even predict the price of a stock in the future. He would like to invest in a stock **exactly once** for a short term starting after day 0 in such a way that he could gain maximum profit from it. But Rhithick is feeling sick (probably due to COVID 19) so he needs your help in obtaining maximum profit from the stock by choosing when to invest and when to sell the same stock. Buying and selling of stock happens at the end of day.

Rhithick can invest at any day after day 0 and can sell at any day in the future. The starting element of the given series of elements will be day 0 (you can buy the stock after day 0 at the price of the day 0) the stock and the next element will be day 1 and the next day will be day 2 and so on.

**Note:** Ideally one would invest when the stock price is low and sell it when the stock price is high.

### Input format

- The first line contains T, the no. of. Test cases ( $1 \leq T \leq 1000$ )
- First line of every test case contains N, the number of days Rhithick can predict the price of the stock. ( $2 \leq N \leq 10^5$ )
- Second line of every test case contains  $a_i$  for  $1 \leq i \leq N$ . ( $1 \leq a_i \leq 10^9$ ), the closing price values at the end of day i.
- $\sum N$  over all test cases does not exceed  $10^5$

### Output format

- N lines, each line should print an integer - Maximum profit obtained.

### Example 1

```
1
5
5 9 2 6 3
```

### Output 1

```
4
```

### Explanation 1

If Rhithick invests at the end of day 0 by buying the stock for 5 Rupees and sells it at the end of day 2 he would earn 9 Rupees. Thus his profit is 4 Rupees and that is the maximum value he could obtain.

**Example 2**

1

2

45 28

**Output 1**

-17

**Explanation 1**

Since there is no other choice left, Rhithick has to invest at the end of day 0 by buying the stock for 45 Rupees and selling it at the end of day 2 he would earn 28 Rupees. Thus his profit would be -17 Rupees and that is the maximum value he could obtain.