Problem G
Stock Baron

Time limit: **6 seconds**
Memory limit: **1024 megabytes**

Problem Description

The elderly at the nursing home recently became enthusiastic about buying stocks. Worried that failed investments might leave them unable to pay for their living expenses, the director invited an investment consultant, Ruyu, to give them a lesson.

In her class, Ruyu wanted the seniors to first grasp a fundamental investment concept: "buy low, sell high" – that is, purchasing when the price is lowest and selling when it reaches its peak, in order to maximize profit.

To let everyone practice, she planned to use historical stock price data. However, since the dataset was too large, Ruyu decided to write a program to help with the calculation. She would first input the number of observation days, followed by the stock prices of each day. The program needs to determine a "buy day" and a later "sell day" that yield the maximum possible profit. If no profit can be made, then no transaction should be performed.

Input Format

Your program is to read from standard input. The first line contains an integer N, representing the number of test cases. For each test case, the first line contains an integer D, the number of days observed. The second line contains D integers $P_1, P_2, \cdots, P_D (2 \leq D \leq 10^5)$, which separated by spaces.

Output Format

Your program is to write to standard output. Print exactly one line for each test case. The line is to contain the maximum profit obtainable within that period. If no profit can be made, the output should be "0".

Technical Specification

- $1 \leq N \leq 10,000$
- $2 \leq D \leq 10^5$
- $0 \leq P_i \leq 10^4$, where $1 \leq i \leq D$

Sample Input 1

```
2
6
7 1 5 3 6 4
```

Sample Output 1

```
5
0
```

```
5
7 6 4 3 1
```