

时间限制: C/C++/Rust/Pascal 2秒, 其他语言4秒

空间限制: C/C++/Rust/Pascal 1024 M, 其他语言2048 M

Special Judge, 64bit IO Format: %Ild

## 题目描述 🔀

Xiao Ming and n competitors are participating in a "Ladder" game. Each competitor has a score, and the scores are arranged in strictly increasing order, that is:

$$a_1 < a_2 < \cdots < a_n$$

Xiao Ming is initially not among these n competitors. Now, Xiao Ming wants to improve his ranking through "challenges."

Each time he challenges, Xiao Ming will choose the **lowest scoring competitor** who has a higher score than him. The rules of the challenge are as follows:

- Xiao Ming's score increases by 1;
- ullet The challenged competitor's score decreases by 1.

There are a total of q queries. Each query provides Xiao Ming's initial score x and the target ranking y (ranked by current scores, with ties considered as the same rank). You need to determine how many challenges Xiao Ming **needs at least** to achieve that ranking. Output 0 if Xiao Ming has already achieved (or even above) the target ranking without any challenge.

## 输入描述:

The first line contains two integers n and q, representing the number of competitors and the number of queries;

The second line contains n strictly increasing integers  $a_1, a_2, \ldots, a_n$ , representing the initial scores of each competitor;

The following q lines each contain two integers x and y, representing Xiao Ming's initial score and his target ranking.

## 输出描述:

For each query, output an integer indicating how many challenges Xiao Ming needs at least to reach the target ranking.

示例1

① C++ (clang++18)

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运行结果

自测辑