
Billy loves chocolates

Input file: **standard input**
Output file: **standard output**
Time limit: 2 seconds
Memory limit: 256 megabytes

Billy loves chocolates. His mother gives him a sorted array of prices of different kinds of chocolates. All the kinds of chocolates have unique prices. Every day, for Q days, the mother gives Billy two integers, which are the prices of two kinds of chocolates (present in the array for sure), and Billy has to tell the mother how many kinds of chocolates' prices lie between the two given kinds of chocolates (both included). As Billy is very young, he needs your help.

Input

The first line contains two integers, N and Q , representing the array of prices and the number of days (number of queries) respectively.

The second line contains the sorted array of unique prices of kinds of chocolates.

Next Q lines contain two integers A and B , the query.

$$2 \leq N \leq 10^6$$

$$2 \leq Q \leq 10^4$$

$$1 \leq \text{price of a kind of chocolate} \leq 10^8$$

$$A < B$$

Output

Output Q lines, each line containing one integer - the solution to the query.

Example

standard input	standard output
4 2	2
11 20 26 30	4
26 30	
11 30	

Note

C++ users are suggested to use `fast_io` because of large output. That is, write this statement in the beginning of `main()`:

```
ios_base::sync_with_stdio(false); cin.tie(NULL);
```

You can read more about `fast_io` here: <https://www.geeksforgeeks.org/fast-io-for-competitive-programming/>