时间限制：C/C++/Rust/Pascal 8秒，其他语言16秒
空间限制：C/C++/Rust/Pascal 512 M，其他语言1024 M
64bit IO Format: %lld

题目描述

Given an integer sequence $a_1, a_2, \ldots, a_n$, along with a weight sequence $w_1, w_2, \ldots, w_{n-1}$, you need to answer q queries. Each query gives a positive integer d, and you need to clamp the sequence $a_1, a_2, \ldots, a_n$ to a range $[l, r]$ satisfying $0 \leq r - l \leq d$ that maximizes $\sum_{i=1}^{n-1} w_i \times |a_i - a_{i+1}|$, where $|x|$ is the absolute value of x.

More specifically, clamping the sequence $a_1, a_2, \ldots, a_n$ to the range $[l, r]$ makes each element

$$a_i := \begin{cases} l, & a_i < l; \\ a_i, & l \leq a_i \leq r; \\ r, & a_i > r. \end{cases}$$

Both l and r are arbitrary real numbers decided by you under the given constraints. It can be shown that the maximum weighted sum is always an integer.

输入描述:

The first line contains two integers n ($2 \leq n \leq 1\,000$) and q ($1 \leq q \leq 10^6$), indicating the length of the given sequence and the number of queries.

The second line contains n integers $a_1, a_2, \ldots, a_n$ ($-10^9 \leq a_i \leq 10^9$), indicating the given sequence.

The third line contains $n-1$ integers $w_1, w_2, \ldots, w_{n-1}$ ($-10^6 \leq w_i \leq 10^6$), indicating the weight sequence.

Then q lines follow, each containing an integer d ($1 \leq d \leq 2 \times 10^9$), indicating the given parameter for this query.

输出描述:

Output q lines, each containing a single integer, indicating the maximum weighted sum under the given parameter d.

示例1

输入 复制

C++（clang++18）

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ACM模
请通过
入输出
出描述

运行结果 自测