

P3406 Undersea High-Speed Railway

题目描述

The railway passes through N cities, each of which has a station. However, because the cities could not coordinate, each time you travel between two adjacent cities (in either direction), you must buy a separate ticket for that segment. Segment i connects city i and city $i + 1$ ($1 \leq i < N$). If you travel farther, you need to buy multiple tickets. A paper one-way ticket for segment i costs A_i Boai yuan.

Although coordination fell short, the companies of each segment introduced IC cards for convenience. For segment i , you can pay a fee of C_i Boai yuan to purchase an IC card, after which each ride on this segment only deducts B_i ($B_i < A_i$) yuan. IC cards can be purchased online in advance; you do not need to buy them in the corresponding city. The card fee is non-refundable and cannot be used to buy tickets. Each card can be topped up with any amount. An IC card for segment i cannot be used on other segments.

Uim needs to go on a business trip to visit M cities, starting from city P_1 and visiting cities in the order $P_1, P_2, P_3, \dots, P_M$. A city may be visited multiple times; consecutive cities in the sequence are not necessarily adjacent on the line, and they are guaranteed to be different.

Now he wants to know, after the trip ends, what is the minimum amount of money he will spend in total, including the cost of paper tickets, buying IC cards, and the rides paid with IC cards.

输入格式

- The first line contains two integers, N, M .
- The next line contains M integers, representing P_i .
- The next $N - 1$ lines describe the segments: for segment i , three integers A_i, B_i, C_i .

输出格式

Output a single integer, the minimum total cost.

输入输出样例 #1

输入 #1

```
9 10
3 1 4 1 5 9 2 6 5 3
200 100 50
300 299 100
500 200 500
345 234 123
100 50 100
600 100 1
450 400 80
2 1 10
```

输出 #1

```
6394
```

说明/提示

- Buy paper tickets for 2 to 3 and 8 to 9, and buy IC cards for the others.

Constraints:

- For 30% of the testdata, $M = 2$.
- For another 30% of the testdata, $N \leq 1000$, $M \leq 1000$.
- For 100% of the testdata, $M, N \leq 10^5$, $A_i, B_i, C_i \leq 10^5$.

Translated by ChatGPT 5