

## 6611 Alice's Print Service

Alice is providing print service, while the pricing doesn't seem to be reasonable, so people using her print service found some tricks to save money.

For example, the price when printing less than 100 pages is 20 cents per page, but when printing not less than 100 pages, you just need to pay only 10 cents per page. It's easy to figure out that if you want to print 99 pages, the best choice is to print an extra blank page so that the money you need to pay is  $100 \times 10$  cents instead of  $99 \times 20$  cents.

Now given the description of pricing strategy and some queries, your task is to figure out the best ways to complete those queries in order to save money.

### Input

The first line contains an integer  $T$  ( $\approx 10$ ) which is the number of test cases.

Then  $T$  cases follow.

Each case contains 3 lines. The first line contains two integers  $n, m$  ( $0 < n, m \leq 10^5$ ). The second line contains  $2n$  integers  $s_1, p_1, s_2, p_2, \dots, s_n, p_n$  ( $0 = s_1 < s_2 < \dots < s_n \leq 10^9$ ,  $10^9 \geq p_1 \geq p_2 \geq \dots \geq p_n \geq 0$ ). The price when printing no less than  $s_i$  but less than  $s_{i+1}$  pages is  $p_i$  cents per page (for  $i = 1 \dots n - 1$ ). The price when printing no less than  $s_n$  pages is  $p_n$  cents per page. The third line containing  $m$  integers  $q_1 \dots q_m$  ( $0 \leq q_i \leq 10^9$ ) are the queries.

### Output

For each query  $q_i$ , you should output the minimum amount of money (in cents) to pay if you want to print  $q_i$  pages, one output in one line.

### Sample Input

```
1
2 3
0 20 100 10
0 99 100
```

### Sample Output

```
0
1000
1000
```