

Problem E

Timber

Input File: *testdata.in*
Time Limit: 10 seconds

Problem Description

Cypresses are important timber sources. Many timber trading companies would bid cypresses from the market, cut them into pieces of timbers, and sell them out. To win the bid, each company should try to bid the cypresses which can be cut and sold for the largest revenue. In order to prevent losing money, the prime cost on winning the bid for a bunch of cypresses should be lower than the revenue from selling the timbers cut from the bunch of cypresses. However, there is limited time to decide the price for the bid after the detailed information of the cypresses for the next bid is announced. In order to find out the highest possible bid price in time, *Timber Land Co. Ltd.* plans to build up a highly-efficient TIMBER-CUT system so as to assess the maximum revenue by cutting the cypresses into different lengths of timbers, where different lengths of timbers have different prices. Suppose that each cut is free, each cypress is an integral number of meters, and each timber is an integral number of meters. Given a bunch of cypresses with different lengths, please design a *Timber-Cut* system that could calculate and derive the maximal revenue in time.

For instance, as shown in the following table, the price of a 1-meter timber is 1 US dollar, the price of a 2-meter timber is 4 US dollars, and so on. Given a bid with two cypresses whose lengths are 3 and 4 meters respectively, the largest revenue is 14 US dollars by cutting the 3-meter cypress into a 1-meter timber and a 2-meter timber, and the 4-meter cypress into two 2-meter timbers.

length (meter)	1	2	3	4
price (US dollar)	1	4	6	7

Technical Specifications

1. Each cypress is an integral number of meters.
2. Each timber is an integral number of meters.
3. The number of cypresses would be no larger than 10,000.
4. The length of a cypress would be no larger than 10,000.

Input Format

There are multiple input cases in the file. A 0 in the line ends the input. The first line of the input file contains an integer indicating the length m of the tallest cypress. The second line contains m integers, separated by spaces, and the i_{th} integer indicates the price of the timber of i meters in length. The third line of the input file contains an integer indicating the number n of timbers. The fourth line contains n integers, separated by spaces, and the j_{th} integer indicates the length of the j_{th} cypress.

Output Format

Output the maximum revenue in US dollars by cutting the cypresses into timbers and selling all of them out.

Sample Input

```
4
1 4 6 7
2
3 4
0
```

Sample Output

```
14
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