Eating chocolate   X15650_en

Pau has a chocolate bar with $n \times m$ ($1 \leq n, m \leq 10^5$) pieces and he wants to eat it.
In order to do so, Pau decides to apply the following procedure: he selects either a row or a column with at least one remaining piece and then he eats all the pieces that were left.
Each row and each column has a *pleasure accumulator* associated, indicating the number of pleasure units that Pau will obtain for each piece he eats if he selected that row or column. Considering all of this, compute the maximum amount of pleasure that Pau can achieve.

Input

The input contains several test cases. Each case begins with two integers n and m. A line follows containing n numbers with the pleasure accumulators of the n rows, then another line with m numbers with the pleasure accumulators of the m columns. Every pleasure accumulator is an integer number between 1 and 10^4.

Output

For each case, print the maximum pleasure that can be achieved.

Observation

Notice that the final result is too big to store in an `int` variable in C++. Use `long long`.

Sample input 1

```
2 2
1 2
1 1
4 3
2 5 3 4
1 5 1
```

Sample output 1

```
6
48
```

Sample input 2

```
2 2
4 2
3 1
1 1
10
20
```

Sample output 2

```
13
20
```

Problem information

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Generation: 2026-01-25T13:52:09.848Z