Problem A

You are an analyst in a big eletronic corporation Inno. Soon the company is going to present two new phone models, Innophone and Innophone Plus. You want to select the price x of the Innophone and the price y of the Innophone Plus to maximize the amount of money earned (both prices must be positive integers such that $x \leq y$). The manufacturing costs are negligible, and thus you do not need to take them into account. After analyzing the market in a small city you found out it consists of n customers, the i-th customer has a budget of a_i dollars and is willing to buy the most expensive model it can afford. If the prices of both models exceed a_i, the i-th customer will not buy anything.

Input and output

The first line contains a positive integer n ($n \leq 2 \cdot 10^5$), the number of customers. The second line contains n positive integers $a_1, \ldots, a_n$ ($a_i \leq 10^6$), where a_i is the budget of the i-th customer.

Output a single integer, the maximum amount that can be earned by choosing the prices x and y as positive integers such that $x \leq y$.

Example

Input:

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4
300 300 500 600
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Output:

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1600
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We can set $x = 300$ and $y = 500$, so that customers 1 and 2 will buy the Innophone and customers 3 and 4 will buy the Innophone Plus, with the total amount earned being $3 \times 300 + 2 \times 500 = 1600$.