

Honey

Fluffy is a squirrel who likes honey very much. He lives on a tall and big tree and always collects honey from the N number of beehives on the tree.

One day, he notices that all the bees have gone out to work. Since it is now safe for him to collect the honey, he decides to do so. The only way for him to collect the honey is by using his M *ml* honey pot. On each trip, he can go to any one of the beehives and collect as much honey as he can using his honey pot. As Fluffy is a lazy squirrel, he decides not to collect honey more than K times.

Assume that Fluffy can determine the amount of honey m_i *ml* in the beehives accurately by just looking at them. Help Fluffy to calculate the maximum possible amount of honey that he can collect.

Input:

Line 1: Three positive integers: N , M and K .

Line 2 to $(N + 1)$: Positive integers m_i , one on each line.

Output:

A single integer stating the maximum possible amount of honey Fluffy can collect.

Constraints:

- Time Limit: 1s
- Memory Limit: 64MB
- $N \leq 200,000$
- $K \leq 2,000,000,000$
- $M \leq 500,000$
- $m_i \leq 500,000$

Subtasks:

Subtask 1 (10 points): $N, M \leq 10,000$, $K \leq 100,000$ and all $m_i < M$.

Subtask 2 (25 points): $N, M \leq 10,000$ and $K \leq 100,000$.

Subtask 3 (35 points): No additional constraints apply.

Example 1

Input:

6 10 4

11

7

5

9

3

7

Output:

33

Explanation:

Take 10 *ml* from the 1st hive, then 7 *ml* from the second, 9 *ml* from the 4th and finally 7 *ml* from the last one. This is the maximum possible, totaling $10+7+9+7 = 33$.

Example 2

Input:

3 10 3

13

19

4

Output:

29

Explanation:

Take 10 *ml* from the 1st hive, then 10 *ml* from the 2nd hive and another 9 *ml* from the 2nd hive, totaling $10+10+9 = 29$