



Light Yagami Shopping Spree

Submit solution

All submissions
Best submissions

✔ Points: 100 (partial)

② Time limit: 2.0s

■ Memory limit: 256M

∨ Allowed languages

С

 $\it Light\ Yagami$, a strategic shopper, wants to purchase N items with the least amount of money possible. Each item has a price in yen (Japan's currency), denoted by A_i for the i^{th} item.

Light has the advantage of M discount tickets. These tickets offer a special discount when used for a purchase. For each item, Light can use any number of his remaining discount tickets (Y tickets used) to get the item at a discounted price. The discount works by dividing the original price (X yen) by 2 raised to the power of the number of tickets used (X / 2^Y), rounded down to the nearest integer.

Your challenge is to determine the minimum total amount of money Light Yagami needs to spend to buy all N items using his available discount tickets (M) strategically.

Input Format

N M the first line contains two integer: **N** which is the number of items Light Yagami is going to buy one by one and **M** is the discount tickets Light has, and he can use any number of them when buying an item.

 $[a[1] \ a[2] \ldots \ a[N]]$ the second line consists of N integer which is the price of the i^{th} item Light buys.

Output Format

Output a single integer m which is the minimum amount of money required to buy all the items.

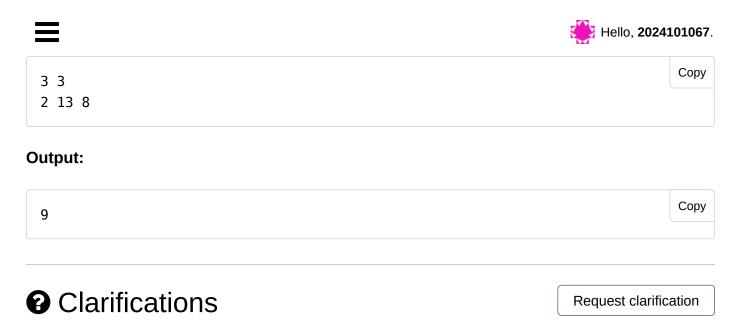
Constraints

$$1 <= N, M <= 1e5$$

$$1 <= a[i] <= 1e9$$

proudly powered by **DMOJ** | English (en)

1 of 2 3/6/25, 20:15



No clarifications have been made at this time.

2 of 2 3/6/25, 20:15