Buy Maximum Stocks

by code_hard123

In a stock market, there is a product with its infinite stocks. The stock prices are given for n days, where $arr[i]$ denotes the price of the stock on the i^{th} day. There is a rule that a customer can buy at most i stock on the i^{th} day. If the customer has an amount of k dollars initially, find out the maximum number of stocks they can buy?

For example, for 3 days the price of a stock is given as $7, 10, 4$. You can buy 1 stock worth $7\$$ on day 1, 2 stocks worth $10\$$ each on day 2 and 3 stocks worth $4\$$ each on day 3. If $k = 100\$$, you can buy all the stocks (total 6) for $39\$$.

Input Format

The first line contains an integer n denoting the number of days.
The next line contains n space-separated integers where i^{th} integer denotes the price of the stock on the i^{th} day. Next line contains a positive integer k which is the initial amount with the customer.

Constraints

- $1 \leq n \leq 10^5$
- $1 \leq arr[i] \leq 100$
- $1 \leq k \leq 10^{12}$

Output Format

Print the maximum number of stock that a customer can buy.

Sample Input 0

```
3
10 7 19
45
```

Sample Output 0

```
4
```

Explanation 0

The customer can purchase 1 stock on day 1, 2 stock on day 2 and 1 stock on day 3 for 10, $7 \times 2 = 14$ and 19 respectively. Hence, total amount is $10 + 14 + 19 = 43$ and number of stocks purchased is 4.

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Current Buffer (saved locally, editable)

BASH

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1
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Upload Code as File

Test against custom input

Run Code

Submit Code