ECOO '17 R2 P3 - Lunch Time

Time limit: 13.0s **Memory limit:** 64M

Since beginning her university studies, Ava has been going to a nearby plaza for lunch. In order to maintain good eating habits throughout her university career, Ava has crafted a perfect dining strategy.

Ava began by eating at each of the N restaurants (numbered 1 through N) at the plaza and rating how much she enjoyed the food. Once she gathered all the ratings, she would only eat at the highest-rated restaurant. (If there is a tie, she eats at the lowest-numbered restaurant.) However, after a week of eating the same food, Ava realized she needs more variety in her diet. To fix this issue, she decided that eating at a restaurant would cause its rating to drop by a fixed amount, M.

Armed with her dining strategy, Ava wonders where she will grab lunch on her last day of university, which is K days away if she eats at exactly one restaurant per day.

Input Specification

The input contains 10 test cases. Each test case starts with three integers N, M $(1 \leq N, M \leq 10^5)$, K $(1 \leq K \leq 10^{12})$. The next line contains N positive integers R_p $(1 \leq R_p \leq 10^9)$, where R_p represents the rating of the p^{th} restaurant at the plaza. Restaurants are numbered starting from 1.

For the first four test cases in the file, $N \cdot K \leq 10^6$. For the first seven cases, $K \leq 10^6$.

Output Specification

For each test case, your program should output one integer representing the restaurant Ava will eat at on the K^{th} day.

Sample Input

```
2 5 4
20 17
5 4 7
1 2 4 8 16
4 8 100
3 22 20 14
```

Sample Output

```
2
5
3
```

Note: Only 3 cases are shown in this sample.