



K-th maximum

Mouse Stofl has obtained a list of numbers and wants to determine the k -th largest of them. For $k = 0$ this means the largest one, for $k = 1$ the second largest one, for $k = 2$ the third largest one and for $k = 3$ the fourth largest one.

Input

The first line contains the two numbers n and k , where n is the amount of numbers.

On the second line, n numbers a_0, a_1, \dots, a_{n-1} follow.

Output

Print a single number: the k -th largest one.

Limits

There are 8 test groups. In all tests we have $0 \leq a_i \leq 10^{18}$.

- In test group 1, worth 10 points, we have $k = 0$ and $1 \leq n \leq 100$.
- In test group 2, worth 10 points, we have $k = 1$ and $2 \leq n \leq 100$.
- In test group 3, worth 10 points, we have $k = 2$ and $3 \leq n \leq 100$.
- In test group 4, worth 10 points, we have $k = 3$ and $4 \leq n \leq 100$.
- In test group 5, worth 20 points, we have $k = 0$ and $1 \leq n \leq 5 \cdot 10^6$.
- In test group 6, worth 20 points, we have $k = 1$ and $2 \leq n \leq 5 \cdot 10^6$.
- In test group 7, worth 10 points, we have $k = 2$ and $3 \leq n \leq 5 \cdot 10^6$.
- In test group 8, worth 10 points, we have $k = 3$ and $4 \leq n \leq 5 \cdot 10^6$.

Beispiele

Input	Output
4 0 3 5 3 1	5

Input	Output
4 1 3 5 3 1	3

Input	Output
4 2 3 5 3 1	3



Swiss Olympiad in Informatics

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Task *kthmax*

Input	Output
4 3 3 5 3 1	1