# Perica

—“I’m stopping by Žnidaršić’s house, you play the piano, Perica.”
—“Ok, dad, I will!”

And so, Perica began playing the piano. His piano consists of $N$ keys. Each key has a value written on it, $a_i$. When Perica plays the piano, he presses exactly $K$ different keys at the same time. The piano is a bit strange because, after pressing $K$ keys at the same time, it will play only the key with the largest value. Perica is going to play each combination of $K$ keys on the piano and he wants to know the sum of values of the keys that will be played.

Help Perica determine the remainder of that number modulo $1\,000\,000\,007$.

## Input

The first line of input contains two integers $N$ and $K$ ($1 \leq N \leq 100\,000, 1 \leq K \leq 50$). The following line of input contains $N$ integers $a_i$ ($0 \leq a_i \leq 10^9$).

## Output

The first and only line of output must contain the required number from the task.

### Sample Input 1

```
5 3
2 4 2 3 4
```

### Sample Output 1

```
39
```

### Sample Input 2

```
5 1
1 0 1 1 1
```

### Sample Output 2

```
4
```

### Sample Input 3

```
5 2
3 3 4 0 0
```

### Sample Output 3

```
31
```

**Problem ID:** perica
**CPU Time limit:** 1 secor
**Memory limit:** 1024 ME
**Difficulty:** 5.3

**Category:** 5.4b, Binomia Coefficients
**Hint:** sorting + binomial coefficient; take i-th larg element and use its binc coefficient to get the nu times it will appear in cu array, 'remove' and repe summing up all values

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Help