Problem E. Perica

Time limit	1000 ms
Mem limit	1048576 kB
OS	Linux

—"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 1

Input	Output
5 3 2 4 2 3 4	39

Sample 2

Input	Output
5 1 1 0 1 1 1	4

Sample 3

Input	Output
5 2 3 3 4 0 0	31