Problem K: Top K for the Crown

Filename: topk

Time limit: 10 seconds

After narrowly escaping defeat in the Final Substring Showdown, Arup challenged Christian to a rematch—this time with a game rooted in numerical intuition instead of string wizardry.

Christian, ever the tactician, pulled out a bag of numbers and made a bold claim:

"You pick any k numbers from this list—no repeats. Let’s see if you can guess their sum faster than I can!"

Arup, never one to back down, accepted. But now the campers from the UCF Competitive Programming want in. Can you prove you're faster than both of them?

## **Problem**

You are given a list of integers and an integer **k**. Your task is to find the sum of the **k** largest numbers in the list.

**Input**

Input will begin with a single integer **c**, the number of test cases. Each test case will consist of two lines:

* The first line contains two integers **n** and **k**, where **n** is the number of integers in the list.
* The second line contains **n** space-separated integers **a1, a2, ..., an**, the list of integers.

**Output**

For each test case, print a single integer on its own line: the sum of the top **k** largest numbers from the list.

## **Input Bounds and Corresponding Credit**

| **50 Points** |
| --- |
| * 1 ≤ **c** ≤ 20 * 1 ≤ **n** ≤ 106 * -109 ≤ **aᵢ** ≤ 109 * 1 ≤ **k** ≤ **n** |

## 

## **Samples**

| **Input** | **Output** |
| --- | --- |
| | 2 | | --- | | 5 2  1 5 2 5 3 | | 6 3  -1 -2 -3 -2 -1 -5 | | | 10 | | --- | | -4 | |