

Partition into two subarrays of lengths k and $(N - k)$ such that the difference of sums is maximum

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#include <bits/stdc++.h>

using namespace std;

int arrPartition(vector<int> &arr, int &k, int &N) {
    int sum = 0, sum1 = 0;
    for (int a: arr) sum += a;
    sort(arr.begin(), arr.end(), [](const int &a, const int &b) {return a > b;});
    int maxLen = max(k, N - k);
    for (int i = 0; i < maxLen; ++i)
        sum1 += arr[i];
    return sum1 - (sum - sum1);
}

int main() {
    vector<int> arr = {8, 4, 5, 2, 10};
    int k = 2, N = 5;
    printf("%d\n", arrPartition(arr, k, N));
}
```