#include <iostream>

#include <vector>

using namespace std;

int maxSubArray(vector<int>& nums, int left, int right) {

if (left == right) return nums[left];

int mid = left + (right - left) / 2;

int leftMax = maxSubArray(nums, left, mid);

int rightMax = maxSubArray(nums, mid+1, right);

int crossMax = nums[mid];

int sum = nums[mid];

for (int i = mid-1; i >= left; i--) {

sum += nums[i];

crossMax = max(crossMax, sum);

}

sum = crossMax;

for (int i = mid+1; i <= right; i++) {

sum += nums[i];

crossMax = max(crossMax, sum);

}

return max(leftMax, max(rightMax, crossMax));

}

int main() {

vector<int> a{-20,11,-4,13,-5,-2};

cout << maxSubArray(a, 0, a.size()-1) << endl;

return 0;

}