Kadane's Algorithm For contigious maximum
value of a subarray :

4 3 1 5 6

O(N)

(4)

4, 3, 1, 5, 6

(4) = sum = 4

4 3 = sum = 7

4 (3)(1) = sum = 4

4 (3)(1) 5 6 = sum =
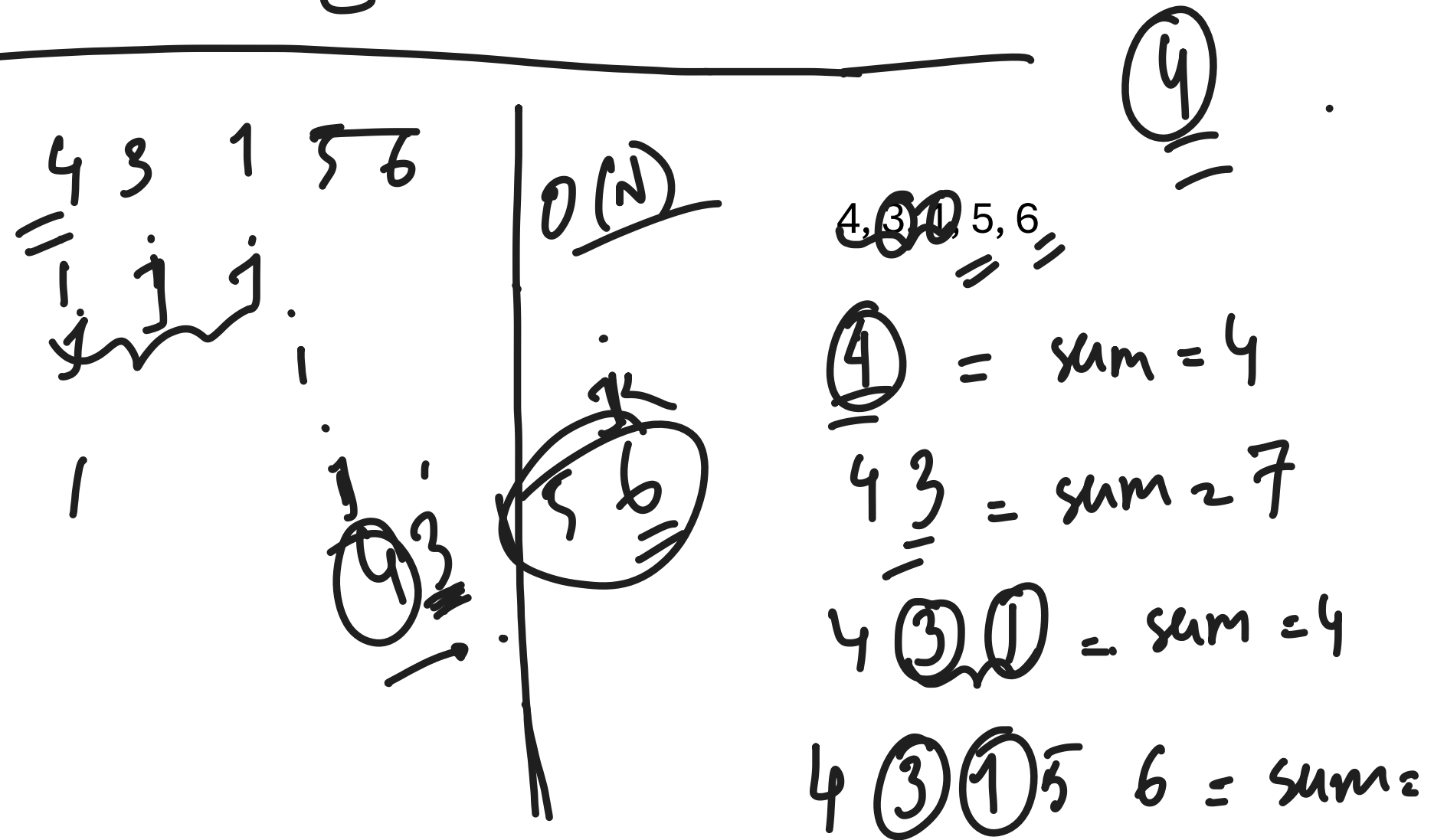
Pseudo code:

maxSum = LL.MIN
sum = 0;
for P to N-1
    sum + = vec [i]
    maxSum = max (maxSum, sum)
    if (sum < 0){
        sum = 0;
    }