

# Kadane's Algorithm

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# □ Kadane's Algorithm with All Sums Printed Step-by-Step
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arr = [2, -1, 4, -3, 5, -2]
n = len(arr)

max_sum = float('-inf')
current_sum = 0

print("□ Kadane's Step-by-Step Subarray Sums:\n")

for i in range(n):
    current_sum += arr[i]
    print(f"Step {i+1} → Add {arr[i]} → Current Sum: {current_sum}")

    if current_sum > max_sum:
        max_sum = current_sum

    if current_sum < 0:
        print(f"    Resetting current sum to 0 (was {current_sum})")
        current_sum = 0

print("\n□ Maximum Subarray Sum:", max_sum)

□ Kadane's Step-by-Step Subarray Sums:

Step 1 → Add 2 → Current Sum: 2
Step 2 → Add -1 → Current Sum: 1
Step 3 → Add 4 → Current Sum: 5
Step 4 → Add -3 → Current Sum: 2
Step 5 → Add 5 → Current Sum: 7
Step 6 → Add -2 → Current Sum: 5

□ Maximum Subarray Sum: 7
```