Please show how to reduce RMQ to RMSQ in O(n) time. Give an example to show it.

## Range Maximum Query Problem(RMQ)

Given a sequence of numbers, return the maximum value within these numbers. Ex.

Input: 6, 8, 12, 46, 7, 18, 5 Output: 46

## Range Maximum-Sum Segment Query Problem(RMSQ)

Given a sequence of numbers, return start index and end index of the maximum-sum segment within these numbers. Ex.

Input: -10, 4, -2, 5, -5, 4, -3, 6, -11, 8

Output: 1, 7 (*The maximum-sum segment is* {4, -2, 5, -5, 4, -3, 6})