Topic Partitions

① Given an array A, find the value of $A[i]-A[j]$

$\Rightarrow$ Max = $A[n-1]-A[0]$

② Given an array A, find the $A[i]-A[j]$ where $i>j$ and $A[i]>A[j]$

$\Rightarrow$ Max = $A[n-1]-A[0]$

③ Find the max sum of a subarray

$\Rightarrow$ Kadane's algorithm for subarray

Find a pair (i,j) such that $A[i]+A[j]=K$ & $i \neq j$

$\Rightarrow$ Sort the array $\rightarrow$ $O(n \log n)$

$\Rightarrow$ Use a hash table $\rightarrow$ $O(n)$

$\Rightarrow$ Use two pointers $\rightarrow$ $O(