

✓ 11. Container With Most Water Medium

```
int maxArea (int[] heights):
```

```
left = 0, right = len(heights) - 1, max = 0 // set initial pointers & initial max
```

```
WHILE left < right: // While the pointers do not meet
```

```
diff = right - left, cap = min(heights[left], heights[right])
```

```
amount = diff * cap // calculate amount
```

```
IF amount > max: max = amount // update max if necessary
```

```
IF heights[left] < heights[right]: left++ // increment left if right is greater
```

```
ELSE: right-- // decrement right otherwise
```

```
Return max
```

Complexity: $O(n)$

✓ 713. Subarray Product Less Than k Medium

```
int countSubarrays (int[] nums, int k):
```

```
prev = 1, beg = 0, total = 0 // default previous product = 1, beg of window = 0
```

```
FOR i = 0; i < len(nums); i++:
```

```
IF nums[i] >= k: // num[i] ≥ k ⇒ product * num[i] ≥ k
```

```
prev = 1, beg = i + 1 // reset prev product & beg to next  
continue // skip rest of this iteration
```

```
WHILE nums[i] * prev ≥ k: prev /= nums[beg++] // chop window until  
// product < k
```

```
total += i - beg + 1 // add window length + 1 (for itself) to total
```

```
prev *= nums[i] // update prev product
```

```
Return total
```

Complexity $O(n)$

✓ 438. Find All Anagrams in a String Easy

```
boolean isAnagram (Map<Integer> one, two): // helper function to check if is  
// anagram  
return one.equals(two)
```

```
List<Integer> findAnagrams (String s, p):
```

```
ret = [] // initialize return variable
```

```
IF len(s) < len(p): return ret // Not possible to contain anagrams
```

```
Map<Integer> letters = {}, temp = {} // define the maps
```

```
FOR char c IN s:
```

```
    letters[c] = letters[c] + 1 IF c IN letters ELSE 0 // map each letter  
// to # of occurrences
```

```
FOR i = 0 ; i < len(p) ; i++:
```

```
    temp[s[i]] = temp[s[i]] + 1 IF s[i] IN temp ELSE 0 // check first  
// window
```

```
FOR i = 0 ; i < len(s) - len(p) + 1 ; i++: // check all windows by sliding
```

```
    IF isAnagram (letters, temp):
```

```
        ret.add (i) // add index if is anagram
```

```
    temp[s[i]]-- // remove first element in the window
```

```
    IF i < len(s) - len(p): // check if we have not reached last window
```

```
        temp[s[i + len(p)]]++ // add next element to end of window
```

```
Return ret // return list containing all the indices
```

Complexity : $O(n)$

✓ 209. Minimum Size Subarray Sum Medium

int countSubarrays (int[] nums, int target)

min = MAX, sum = 0, beg = 0 // initial min is constant MAX

FOR i = 0 ; i < len(nums) ; i++ :

IF nums[i] ≥ target : return 1 // Return 1 is a single greater or equal
// element is found

sum += nums[i] // update sum

IF sum < target : continue // skip rest of this iteration if sum < target

cur = i - beg + 2 // length of window + 1 (to account for upcoming decrement)

WHILE sum ≥ target :

sum -= nums[beg++], cur-- // chop window & decrement cur

min = cur < min ? cur : min // update min if necessary

Return min == MAX ? 0 : min // return min if min changed, otherwise 0

Complexity $O(n)$