

1. <https://leetcode.com/problems/longest-continuous-subarray-with-absolute-diff-less-than-or-equal-to-limit/>

Given an array of integers `nums` and an integer `limit`, return the size of the longest **non-empty** subarray such that the absolute difference between any two elements of this subarray is less than or equal to `limit`.

Example 1:

Input: `nums = [10,1,2,4,7,2], limit = 5`

Output: 4

Explanation: The subarray `[2,4,7,2]` is the longest since the maximum absolute diff is $|2-7| = 5 \leq 5$.

Example 2:

Input: `nums = [4,2,2,2,4,4,2,2], limit = 0`

Output: 3

2. <https://leetcode.com/problems/count-number-of-teams/>

There are `n` soldiers standing in a line. Each soldier is assigned a **unique** `rating` value.

You have to form a team of 3 soldiers amongst them under the following rules:

- Choose 3 soldiers with index `(i, j, k)` with rating `(rating[i], rating[j], rating[k])`.
- A team is valid if: `(rating[i] < rating[j] < rating[k])` or `(rating[i] > rating[j] > rating[k])` where `(0 <= i < j < k < n)`.

Return the number of teams you can form given the conditions. (soldiers can be part of multiple teams).

Example 1:

Input: `rating = [2,5,3,4,1]`

Output: 3

Explanation: We can form three teams given the conditions. `(2,3,4)`, `(5,4,1)`, `(5,3,1)`.

Example 2:

Input: rating = [2,1,3]

Output: 0

Explanation: We can't form any team given the conditions.

3. <https://leetcode.com/problems/maximum-product-subarray/>

Given an integer array `nums`, find the contiguous subarray within an array (containing at least one number) which has the largest product.

Example 1:

Input: [2,3,-2,4]

Output: 6

Explanation: [2,3] has the largest product 6.

Example 2:

Input: [-2,0,-1]

Output: 0

Explanation: The result cannot be 2, because [-2,-1] is not a subarray.