

# Two Pointers

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The two pointers algorithm is typically used for finding solutions in pairs using “two pointers”.

Each variable moves in a single direction, and they only traverse the array a single time.

Therefore, time complexity will be  $O(N+M)$  where  $N$  and  $M$  are the time complexities for the two variables.

Sometimes, two pointers is able to replace binary search, reducing the time complexity and making the implementation easier.

<https://codeforces.com/edu/course/2/lesson/9>

# Two Pointers Problems

- Reversing an array/string
- Checking if string is a palindrome
- Merging two sorted arrays
- Find  $i, j$  such that  $A_i + B_j = X$  where A and B are sorted.
- <https://cses.fi/problemset/task/1641>
- <https://leetcode.com/problems/shortest-subarray-to-be-removed-to-make-array-sorted/description/>

Feedback Form:

<https://forms.gle/JAKfgh3iwm58KkPA7>