

2907. Maximum Profitable Triplets With Increasing Prices I

Description

Given the **0-indexed** arrays `prices` and `profits` of length `n`. There are `n` items in an store where the `ith` item has a price of `prices[i]` and a profit of `profits[i]`.

We have to pick three items with the following condition:

- `prices[i] < prices[j] < prices[k]` where `i < j < k`.

If we pick items with indices `i`, `j` and `k` satisfying the above condition, the profit would be `profits[i] + profits[j] + profits[k]`.

Return *the maximum profit we can get, and -1 if it's not possible to pick three items with the given condition.*

Example 1:

Input: `prices = [10,2,3,4]`, `profits = [100,2,7,10]`

Output: 19

Explanation: We can't pick the item with index `i=0` since there are no indices `j` and `k` such that the condition holds.

So the only triplet we can pick, are the items with indices 1, 2 and 3 and it's a valid pick since `prices[1] < prices[2] < prices[3]`.

The answer would be sum of their profits which is `2 + 7 + 10 = 19`.

Example 2:

Input: `prices = [1,2,3,4,5]`, `profits = [1,5,3,4,6]`

Output: 15

Explanation: We can select any triplet of items since for each triplet of indices `i`, `j` and `k` such that `i < j < k`, the condition holds.

Therefore the maximum profit we can get would be the 3 most profitable items which are indices 1, 3 and 4.

The answer would be sum of their profits which is `5 + 4 + 6 = 15`.

Example 3:

Input: `prices = [4,3,2,1]`, `profits = [33,20,19,87]`

Output: -1

Explanation: We can't select any triplet of indices such that the condition holds, so we return -1.

Constraints:

- `3 <= prices.length == profits.length <= 2000`
- `1 <= prices[i] <= 106`
- `1 <= profits[i] <= 106`

