

# Problem 1705: Maximum Number of Eaten Apples

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 41.33%

**Paid Only:** No

**Tags:** Array, Greedy, Heap (Priority Queue)

## Problem Description

There is a special kind of apple tree that grows apples every day for  $n$  days. On the  $i$ th day, the tree grows  $\text{apples}[i]$  apples that will rot after  $\text{days}[i]$  days, that is on day  $i + \text{days}[i]$  the apples will be rotten and cannot be eaten. On some days, the apple tree does not grow any apples, which are denoted by  $\text{apples}[i] == 0$  and  $\text{days}[i] == 0$ .

You decided to eat **at most** one apple a day (to keep the doctors away). Note that you can keep eating after the first  $n$  days.

Given two integer arrays `days` and `apples` of length  $n$ , return the maximum number of apples you can eat.

**Example 1:**

**Input:** `apples = [1,2,3,5,2]`, `days = [3,2,1,4,2]` **Output:** 7 **Explanation:** You can eat 7 apples: - On the first day, you eat an apple that grew on the first day. - On the second day, you eat an apple that grew on the second day. - On the third day, you eat an apple that grew on the second day. After this day, the apples that grew on the third day rot. - On the fourth to the seventh days, you eat apples that grew on the fourth day.

**Example 2:**

**Input:** `apples = [3,0,0,0,0,2]`, `days = [3,0,0,0,0,2]` **Output:** 5 **Explanation:** You can eat 5 apples: - On the first to the third day you eat apples that grew on the first day. - Do nothing on the fourth and fifth days. - On the sixth and seventh days you eat apples that grew on the sixth day.

**\*\*Constraints:\*\***

\* `n == apples.length == days.length` \* `1 <= n <= 2 \* 104` \* `0 <= apples[i], days[i] <= 2 \* 104`  
\* `days[i] = 0` if and only if `apples[i] = 0`.

## Code Snippets

### C++:

```
class Solution {
public:
    int eatenApples(vector<int>& apples, vector<int>& days) {

    }
};
```

### Java:

```
class Solution {
    public int eatenApples(int[] apples, int[] days) {

    }
}
```

### Python3:

```
class Solution:
    def eatenApples(self, apples: List[int], days: List[int]) -> int:
```