Problem 825: Friends Of Appropriate Ages

Problem Information

Difficulty: Medium
Acceptance Rate: 49.60%
Paid Only: No
Tags: Array, Two Pointers, Binary Search, Sorting

Problem Description

There are `n` persons on a social media website. You are given an integer array `ages` where `ages[i]` is the age of the `ith` person.

A Person `x` will not send a friend request to a person `y` (`x != y`) if any of the following conditions is true:

* `age[y] <= 0.5 * age[x] + 7` * `age[y] > age[x]` * `age[y] > 100 && age[x] < 100`

Otherwise, `x` will send a friend request to `y`.

Note that if `x` sends a request to `y`, `y` will not necessarily send a request to `x`. Also, a person will not send a friend request to themself.

Return _the total number of friend requests made_.

Example 1:

Input: ages = [16,16] **Output:** 2 **Explanation:** 2 people friend request each other.

Example 2:

Input: ages = [16,17,18] **Output:** 2 **Explanation:** Friend requests are made 17 -> 16, 18 -> 17.

Example 3:

Input: ages = [20,30,100,110,120] **Output:** 3 **Explanation:** Friend requests are made 110 -> 100, 120 -> 110, 120 -> 100.

Constraints:

* `n == ages.length` * `1 <= n <= 2 * 104` * `1 <= ages[i] <= 120`

Code Snippets

C++:

```
class Solution {
public:
int numFriendRequests(vector<int>& ages) {

}
};
```

Java:

```
class Solution {
public int numFriendRequests(int[] ages) {

}
}
```

Python3:

```
class Solution:
def numFriendRequests(self, ages: List[int]) -> int:
```