

Let a be a not decreasing list of non-negative floats, with n items, and your task is to find a count of all couples of items of a for which applies this condition $a[i] \cdot a[j] \geq a[i] + a[j]$ where $i, j \in 0 \dots n - 1$

Create an algorithm solving this problem. There is one limitation, you need to solve it in complexity $O(n)$ (or better) for both CPU and memory usage.

Example:

$a = (0.5, 1.2, 2, 5, 8.5, 100)$

Let's show how it works for $i = 3$ so number 5.

| $a[j]$ | $5 \cdot a[j]$ | $5 + a[j]$ |
|--------|----------------|------------|
| 0.5 | 2.5 | 5.5 |
| 1.2 | 6 | 6.2 |
| 2 | 10 | 7 |
| 5 | 25 | 10 |
| 8.5 | 42.5 | 13.5 |
| 100 | 500 | 105 |

So the condition is valid in 4 cases. When we do the same with the rest of the numbers we find that the final result for this example is 20.