1648. Sell Diminishing-Valued Colored Balls

Medium 603 211 Add to List Share

You have an `inventory` of different colored balls, and there is a customer that wants `orders` balls of **any** color.

The customer weirdly values the colored balls. Each colored ball's value is the number of balls **of that color** you currently have in your `inventory`. For example, if you own `6` yellow balls, the customer would pay `6` for the first yellow ball. After the transaction, there are only `5` yellow balls left, so the next yellow ball is then valued at `5` (i.e., the value of the balls decreases as you sell more to the customer).

You are given an integer array, `inventory`, where `inventory[i]` represents the number of balls of the `i`th color that you initially own. You are also given an integer `orders`, which represents the total number of balls that the customer wants. You can sell the balls **in any order**.

Return *the **maximum** total value that you can attain after selling* `orders` *colored balls*. As the answer may be too large, return it **modulo** $10^9 + 7$.

Example 1:


```
Input: inventory = [2,5], orders = 4
Output: 14
Explanation: Sell the 1st color 1 time (2) and the 2nd color 3 times (5 + 4 + 3).
The maximum total value is 2 + 5 + 4 + 3 = 14.
```

```
41          //     . . | .
|. .         . . . |. |.
          . |. .
       . .
42          // _    . . | .
|. . .     _  . . . |. |.
          . |. . .
      . . .
43          //
44          //     | d   | d
d3 |      | d1   |d2| d3
       |d2| d3   |
45
46
47
48          for(i = 1; i <
i++)
49          {
50              long d = x[
x[i];
51              long
requiredCostToCoverArea
52
53              if
(requiredCostToCoverAre
curOrdersSize <= orders
54              {
55                  long ar
(calcAreaOfTrapezoid(x[
1), x[i-1], d))*i;
56                  result
57                  curOrde
requiredCostToCoverArea
58              }
59              else
```

Testcase Run Code Result

Accepted Runtime: 124 ms

Your input
```
[2,5]
4
```

Output 14

Expected 14

Console Use Example Testcase