



STUDENT REPORT

DETAILS

Name

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Roll Number

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EXPERIMENT

Title

MINIMUM ARRAY SUM

Description

Paul is given an array A of length N. He must perform the following Operations on the array sequentially:

- * Choose any two integers from the array and calculate their average.
- * If an element is less than the average, update it to 0. However, if the element is greater than or equal to the average, he need not update it.

Your task is to help Paul find and return an integer value, representing the minimum possible sum of all the elements in the array by performing the above operations.

Note: An exact average should be calculated, even if it results in a decimal.

Input Format:

input1: An integer value N, representing the size of the array A.

input2: An integer array A.

Output Format:

Return an integer value, representing the minimum possible sum of all the elements in the array by

Sample Input

5
1 2 3 4 5

Sample Output

5

Source Code:

```
def min_sum_after_operations(N, A):  
    # Sort the array  
    A.sort()  
  
    # Start with the original sum  
    total_sum = sum(A)  
  
    # We can keep track of which elements can be zeroed out  
    for i in range(N):  
        for j in range(i + 1, N):  
            average = (A[i] + A[j]) / 2  
            # Check if we can zero out elements less than the average  
            for k in range(N):  
                if A[k] < average:  
                    total_sum -= A[k]  
                    A[k] = 0 # Set it to zero  
  
            # Since the array might have been modified,  
            # We can stop if the smallest element is already 0  
            if A[0] == 0:  
                break  
  
    return total_sum  
  
# Example usage  
N = 5  
A = [1, 2, 3, 4, 5]  
result = min_sum_after_operations(N, A)  
print(result) # Output: 5
```

RESULT

1 / 5 Test Cases Passed | 20 %