NAME: Amandeep Sharma

UID: 22BCS16228

Sec: Fl_601-A

1st: 1710 leetcode

```
class Solution { public:

    int maximumUnits(vector<vector<int>>& boxTypes, int truckSize) {

sort(boxTypes.begin(), boxTypes.end(), [](vector<int>& a, vector<int>& b) {

return a[1] > b[1];

        });


        int ans = 0;

        for (auto& box : boxTypes) {

int x = min(box[0], truckSize);

ans += (x * box[1]);          truckSize

-= x;           if (truckSize == 0) break;

        }

        return ans;

    }

};
```

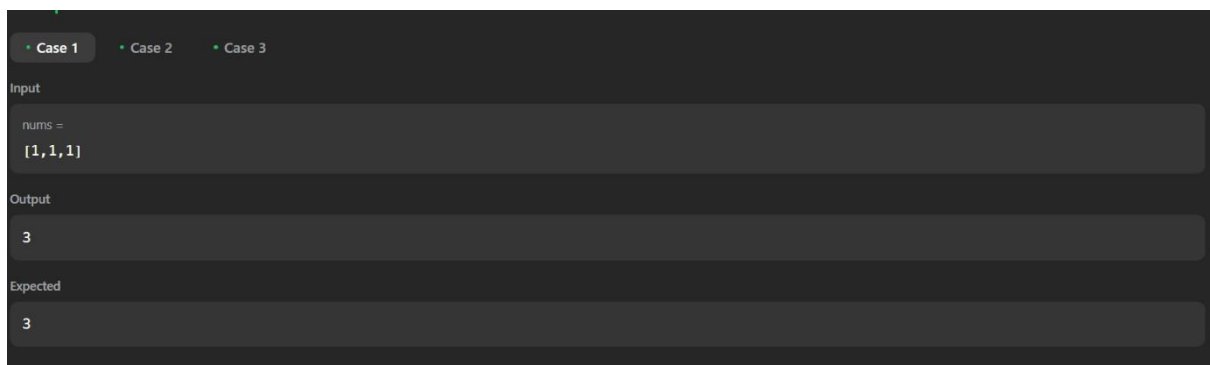## 2ND:1827 leetcode

```cpp
class Solution { public:

    int minOperations(vector<int>& nums) {

        int steps = 0;

        for (int i = 0; i < nums.size() - 1; ++i) {           if
(nums[i] > nums[i + 1]) {             steps +=
((nums[i] - nums[i + 1]) + 1);            nums[i + 1]
+= ((nums[i] - nums[i+1]) + 1);
        } else if (nums[i] == nums[i + 1]) {
steps += 1;          nums[i + 1] += 1;
        }
    }

        return steps;
    }
};
```


3RD :1962 leetcode

```cpp
class Solution { public:

    int minStoneSum(vector<int>& piles, int k) {

        priority_queue<int>pq(piles.begin(),piles.end());

        int ans=0;
for(int i=0;i<k;i++){
int tp=pq.top();
```

```
pq.pop();          tp-
=(tp/2);
pq.push(tp);
    }
    while(!pq.empty()){
ans+=pq.top();          pq.pop();
    }
    return ans;
  }
};
```

4TH : 1717 leetcode

```
class Solution { public:
   int maximumGain(string s, int x, int y) {
vector<char> st1;       stack<char> st2;
char first = (x>y) ? 'a' : 'b';        char
second = (x>y) ? 'b' : 'a';       int maxV=
max(x, y);

    int minV = min(x, y);
int ans=0;       for(char
c: s){
      if(!st1.empty()  &&  st1.back()==first && c== second){
ans= ans+ maxV;            st1.pop_back();
      }
      else{
```

```cpp
            st1.push_back(c);
        }



    }


    for(char c: st1){
        if(!st2.empty()  &&  st2.top()==second && c== first){
ans= ans+ minV;
            st2.pop();
        }
        else{
st2.push(c);
        }


    }


    return ans;


    }


};
```

s =
"cdbcbbaaabab"

x =
4

y =
5

Output
19

Expected
19