Question Summary :

* Given an array parcel and an number extra parcel.
* You need to distribute the extra parcel among the delivery agent.
* The final answer should be minimize the maximum number.

[1 , 3 , 5 , 2] extra\_parcel = 5

* By distributing 5 among , 1 , and 2 [5 , 3 , 5 , 3]
* The minimum maximized value is 5

Observation :

* When k =0 , then the maximum element in the array is the answer.
* When k >= 1 , then the anwer will be from max to max +k
* No w , sort the array and run Bsearch over max to max + k
* It is Bsearch on answers.

Step 1 : Sort the Array

Step 2 : If K is 0 , then max element is the answer.

Step 3 : If k >= 1 , the answer lie between the range max to max + K

private boolean isValid(int [] nums , int limit , int k){

int n = nums.length;

int sum = 0;

for(int i = 0 ; i < n ; i++){

sum += Math.abs(limit - nums[i]);

}

return sum >= k;

}

private int minMaxparcel(int [] nums, int k){

int max = -1;

for(int i : nums){

max= Math.max(max , i);

}

if(k == 0){

return max;

}

int left = max;

int right = max + k;

while(left <= right){

int mid = left + (right - left) / 2;

if(isValid(nums , mid , k)){

ans = Math.min(ans , mid);

right = mid - 1;

}else{

left = mid + 1;

}

}

}