

## Smallest Range I

Easy

Given an array  $A$  of integers, for each integer  $A[i]$  we may choose any  $x$  with  $-K \leq x \leq K$ , and add  $x$  to  $A[i]$ .

After this process, we have some array  $B$ .

Return the smallest possible difference between the maximum value of  $B$  and the minimum value of  $B$ .

### Example 1:

Input:  $A = [1]$ ,  $K = 0$

Output: 0

Explanation:  $B = [1]$

### Example 2:

Input:  $A = [0,10]$ ,  $K = 2$

Output: 6

Explanation:  $B = [2,8]$

### Example 3:

Input:  $A = [1,3,6]$ ,  $K = 3$

Output: 0

Explanation:  $B = [3,3,3]$  or  $B = [4,4,4]$

### Note:

1.  $1 \leq A.length \leq 10000$
2.  $0 \leq A[i] \leq 10000$
3.  $0 \leq K \leq 10000$

