

Binary Search

Kth-Sum

→ most classic one

→ checking part is very normal

(just fix it)

→ Binary search part ***

- How can we be sure that the final mid will be one of the sums?

→ it will definitely be (but we must come from the right side)

say we got sums like that

1 2 5 7 10 12 12 15 20

we want 4th smallest sum (7)

say at some point we got $mid = 9$

so, for ≤ 9 , $cnt = 4 = k$

but we are searching that smallest x for which still $cnt \geq k$

so, again we will try to find x

say $mid = 8$ $cnt = 4$

then $mid = 7$ ** $cnt = 4$

but we cannot move left now
because cnt will be 3

৭ থেকে শুরু করে still $cnt = 4$

৮ থেকে শুরু করে still $cnt = 4$

but ৭ থেকে শুরু করে সাথে সাথে $cnt = 3$

that means \rightarrow ৭ নিজেই একটা
sum ছিলো

$check(mid) \leq k \rightarrow \boxed{ans = 9}$

because we will get the last value
for which $cnt \leq k$