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Day-36

BS Interview Questions - 2

* Aggresive Cows;

1	2	4	8	9

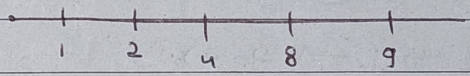
k = 3

distance of

=> The array is of stall ~~(no. of stall)~~.

=> Assign stall to k cows.

=> And Minimum distance b/w any two of them is maximum possible.



=> 1 — 2 — 4 => 1
1 2

=> 1 — 2 — 8 => 1
1 ~~6~~

=> 1 — 4 — 8 = (3)
3 4

=> Using brute force method, we can start by 1 distance and check the above conditions.

=> If we ~~get our~~ got our answer then we check again with increasing the distance.

=> If we don't get the answer now, the ans is previous one.

=> We can simply use a for for this.

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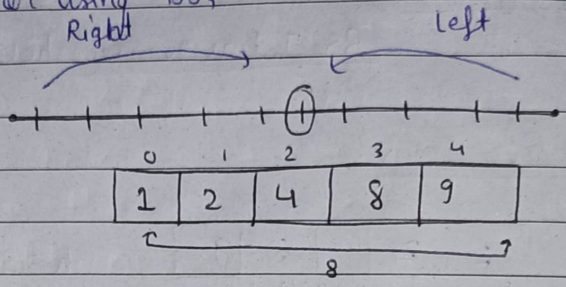
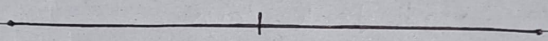
⇒ For using BS,



⇒ start = 1 end = 8



mid = 4 → 1 8 → X

⇒ end = mid-1 = 3

mid = 2

1 → 4 → 8 → ✓ ans = 2

⇒ start = mid+1 = 3

mid = 3 → 1 4 8 → ✓ ans = 3

⇒ start = mid+1 = 4

⇒ So, while (start <= end) X

Loop breaks,

⇒ ans is 3.

⇒ So, when the array is not sorted we will sort the array first.

⇒ If the value of count is less than the given no. of cows move to the left side

⇒ If equal to then to the right side.

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Code stalls, n, k ....

```
start = 1 , end = ; mid , ans ;
Sort (stalls);
end = stalls[n-1] - stalls[0];
while (start <= end){
    mid = start + (end - start)/2;
    int count = 1 , pos = stall[0];
    for( ; i = 1 ; i<n ; i++ ){
        if( pos + mid <= stalls[i] )
        {
            count++;
            pos = stalls[i];
    }
    if(count < k){
        end = mid - 1;
    }else{
        ans = mid;
        start = mid + 1;
    }
```

* Koko Eating Banana

3	6	11	7

H = 8 no. of bananas

=> We have to find in how much ~~time~~ Koko ~~can~~ should eat so that he will eat all the banana in the given time.

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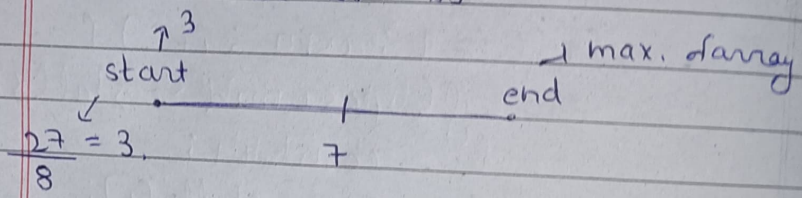
⇉ So, let assume koko eat 1 banana per hour then it takes 27 hours but we only have 8 hours. his

⇉ So, koko will ~~w~~ increase ~~their~~ speed.

⇉ In this way, we will find the right answer.

⇉ So, here we use BS —



⇉ If answer is possible then go left otherwise right.