

L37

## Binary Search : Problem Solving 3

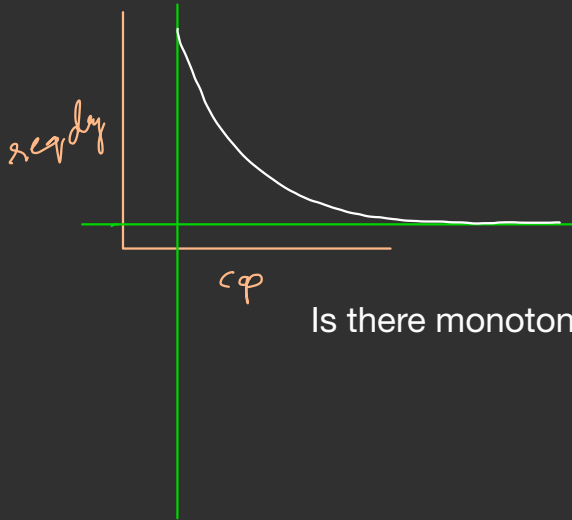
Join Discord - <https://bit.ly/ly-discord>

RECAP

## Last Class for Binary Search Practice

Capacity to ship packages within D days

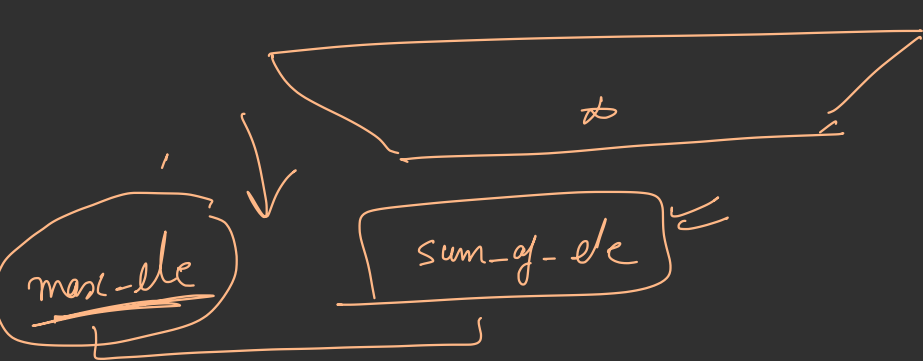
Think in the similar direction as the  
problems in last class



Case 1  
 $req\ day > day$

Is there monotonicity anywhere?

bat	TV	Laptop								
1	2	3	4	5	6	7	8	9	10	
	x	x	x	x	x	x	x	x	x	



Cap	reqQty
$\infty$	1
1000	1
100	1
55	1
1	$\times \infty$
10	

Solution



# Time Complexity

Next problem:  
Appy and Balloons

2	3	1	5
3	4	7	2
0	8	0	10

Given a *candyLimit* for each day, can we find the total number of balloons required to make Appy happy?

3 8 7 6

1 2 1 3

5

Demand	Balloons	Days <sup>1</sup>	1	2	3	4
			2	3	1	5
	Candies/balloon		3	4	7	2

max\_candis = 5

key balloons

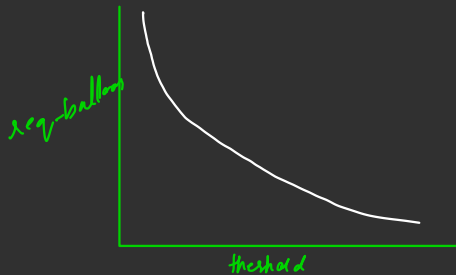
$2 - 5/3$	$3 - 5/4$	$1 - 5/7$	$5 - 5/2$
= 1	= 2	= 1	= 3



0-12

only candie

6    12    7    10



Do we smell monotonicity again?

Solution

# Time Complexity

# Thank You!

Reminder: Going to the gym & observing the trainer work out can help you know the right technique, but you'll muscle up only if you lift some weights yourself.

So, PRACTICE, PRACTICE, PRACTICE!