

# Arithmetic Slices II - Subsequence

nums = { 2, 4, 6, 8, 10 }

Output : 7

(\*) > = 3

(\*) Arithmetic  
- is

$\begin{array}{c} \overset{2}{\curvearrowright} \quad \overset{2}{\curvearrowright} \\ 2, 4, 6 \\ \hline 4, 6, 8 \\ \hline 6, 8, 10 \end{array} \quad > = 3$

$\begin{array}{c} 2, 4, 6, 8 \\ \hline 2, 4, 6, 8, 10 \\ \hline 4, 6, 8, 10 \\ \hline 2, 6, 10 \end{array}$

App Brute

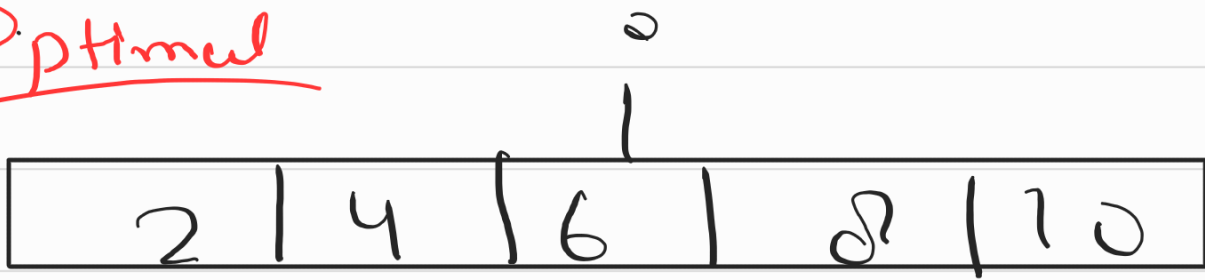
$(2^n)$

$\Rightarrow$  Find all Subsequence

$\Rightarrow > = 3$  22 arith.  $O(n)$

$O(2^n * n)$

Optimal



Hint: Agar mujhe phle ka answer pta hai, toh agar new element aane pe m phle se answer nikal sakte hu.

Taise

mujhe ans  
✓ pta hai

{2, 4, 6, 8} iska

← add 10

(2, 4, 6)

(2, 4, 6, 8)

(4, 6, 8)

→ (2, 4, 6, 8, 10)

→ (4, 6, 8, 10)

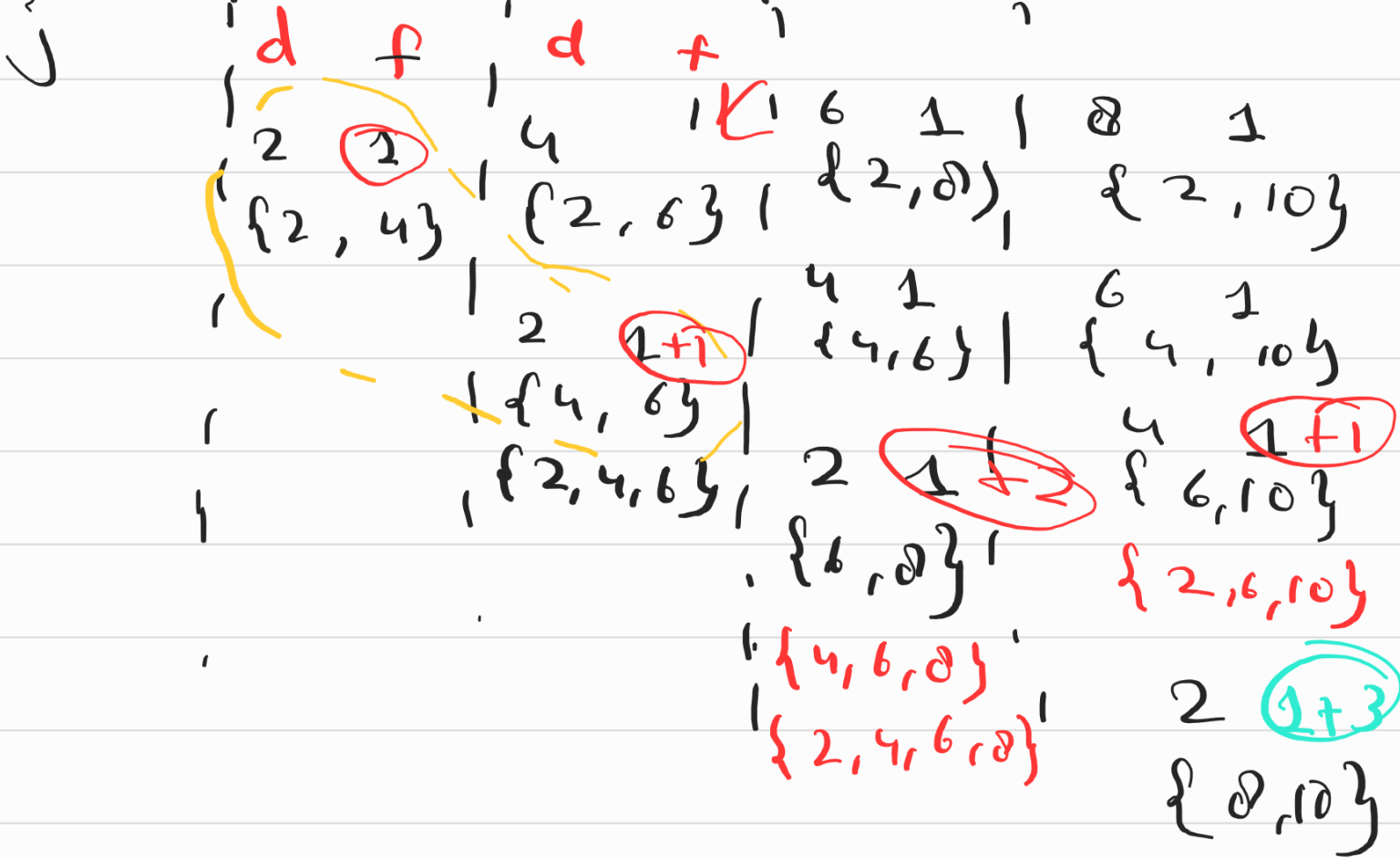
DP

$i \rightarrow j$

$i$

$i$

2	4	6	8	10
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$$\text{result} = 1 + 2 + 1 + 3 = 7$$

$d \rightarrow$  Count of Subsequences

map	map	map
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$j$ 0	1	2	$i$ 3	4
2	4	6	8	10

↑

$$diff = 8 - 2 = 6$$

$mp[j].find(diff)$

$mp[j][diff]$

→ kya hai

mil  
jayega