

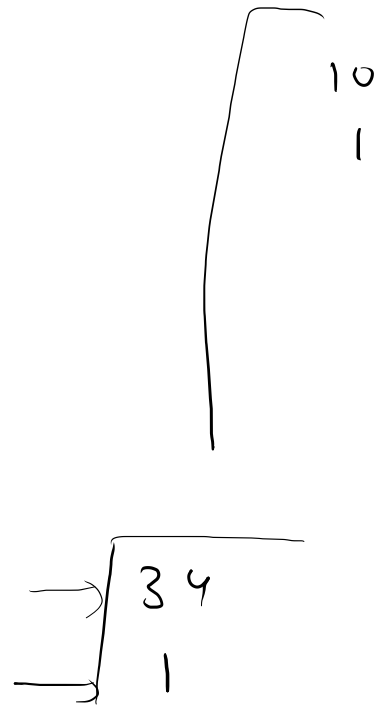
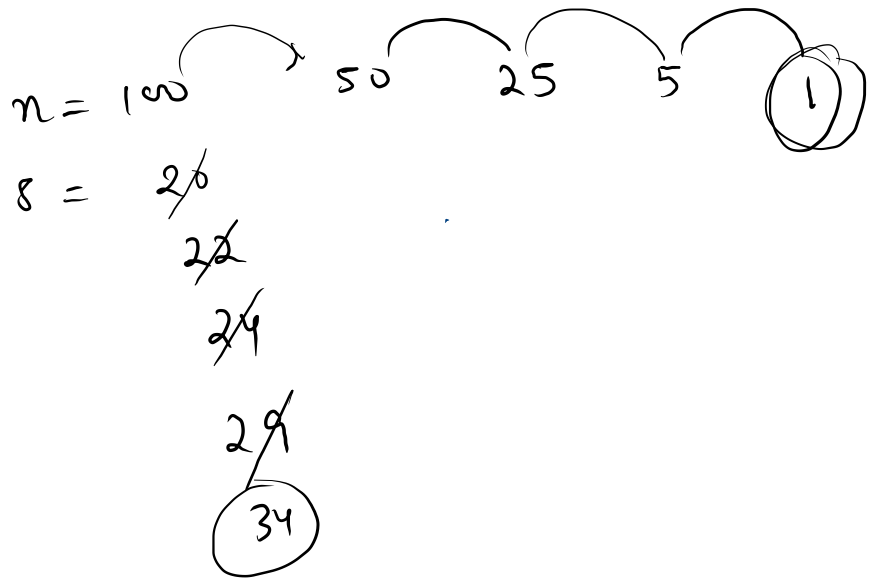
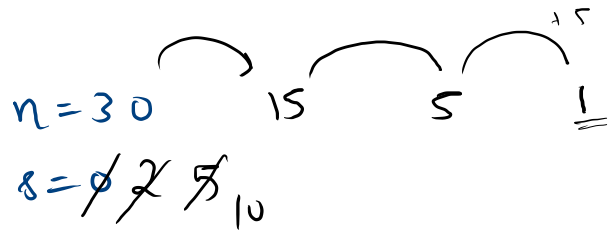
→ free .

Space complexity.

diff double / float .

dtypes.

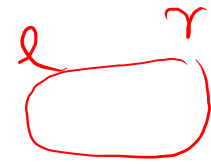
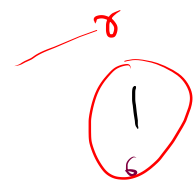
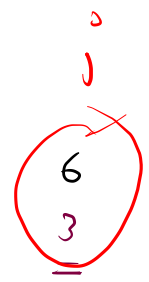
Divide n by 2 3 5 and tell steps



Max. diff b/w 2 numbers.

$d = \cancel{0} / \underline{8}$

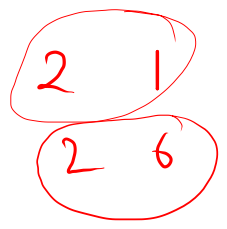
n^2



- 1... l
- 2... r

$r - l$
 $10 - 3$

$10 > 3$



$A[j] > A[i]$

3

$l \quad r$
 $2 \quad 10$

mtn=2
↓

2

↓ ϕ

3

10

6

γ
4

8

↓

1

$O(n)$. ✓

$$\left. \begin{array}{l} 6-3 \\ 6-10 \\ 6-2 \end{array} \right\} 4$$

$$8 - 1$$

$$3 - \text{mtn} = 1$$

$$10 - 2 = 8$$

$$6 - 2 = 4$$

$$4 - 2 = 2$$

$d = \emptyset$

8

$$mtn = \cancel{x} 1$$

2

3

1

10

4

12

↓

$$d = \cancel{p} \cancel{x} \cancel{8} \underline{10}$$

$$d = \underline{\underline{y}} \cancel{\textcircled{9}} \underline{\underline{11}}$$

$$r - l$$

$$\underline{A[i]} - mtn$$

$$3 - 2 =$$

$$1 - 4 = 0$$

$$10 - 1 = 9$$

$$4 - 1 = 3$$

$$12 - 1 = 11$$

$$\underline{1} < 2$$

					↓
3	4	<u>2</u>	10	6	12

 $d = \cancel{0} \cancel{1} \cancel{8}$

10

 $mtn = \cancel{3} 2$
 $4 - 3 = 1$
 $2 - 2$ $2 - 3$
 $10 - 2 = 8$
 $6 - 2 = 4$
 $12 - 2 = 10$

Small. ques.

$[1, N]$

① missing number.

$[1 \quad 2 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8]$

$8 = \underline{33}.$

$$1 + 2 + 3 + \dots + N = \frac{n(n+1)}{2}$$
$$\frac{8(9)}{2} = 36$$
$$36 - 33 = 3$$

$$\frac{n(n+1)}{2}$$

$$1 + -3 + -1 + 5$$

=

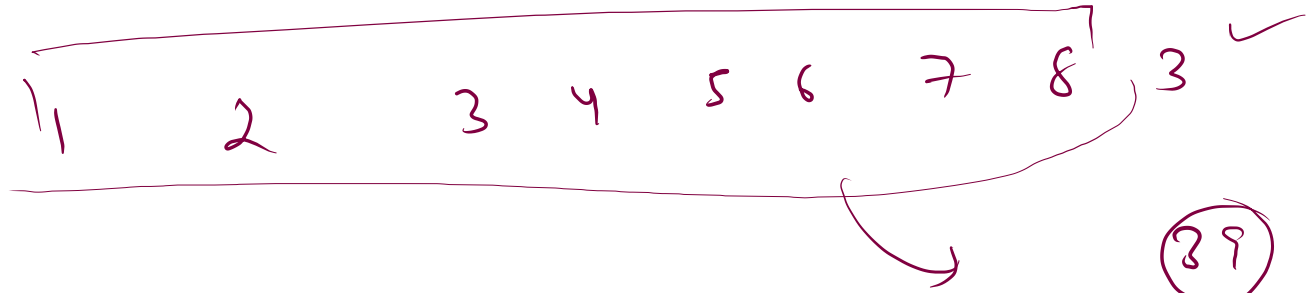
15

$$13$$

$$\frac{5(6)}{2} = 15$$

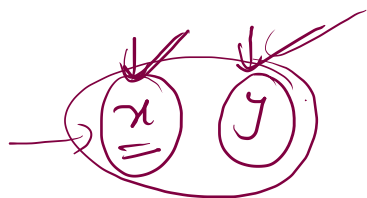
$$15 - 13 = 2$$

Basic question.



$$\begin{array}{r} 89 \\ 36 \\ \hline 3 \end{array}$$

$$\left[\begin{array}{l} \rightarrow 1^2 + 2^2 + 3^2 + \dots + n^2 = \frac{n(n+1)(2n+1)}{6} \\ \rightarrow 1 + 2 + \dots + n = \frac{n(n+1)}{2} \end{array} \right]$$



$$\underline{\textcircled{8}} = \textcircled{\underline{14}}$$

1 2 2 4 5

2 Quadratic. eg^n

Array

M & R.

✓
1

✓
2

✓
2

✓
3

✓
5

$N = 5$

$O(n)$

	1	2	1	0	1
0	1	2	3	4	5

eg.
 $M = 4$
 $R = 2$

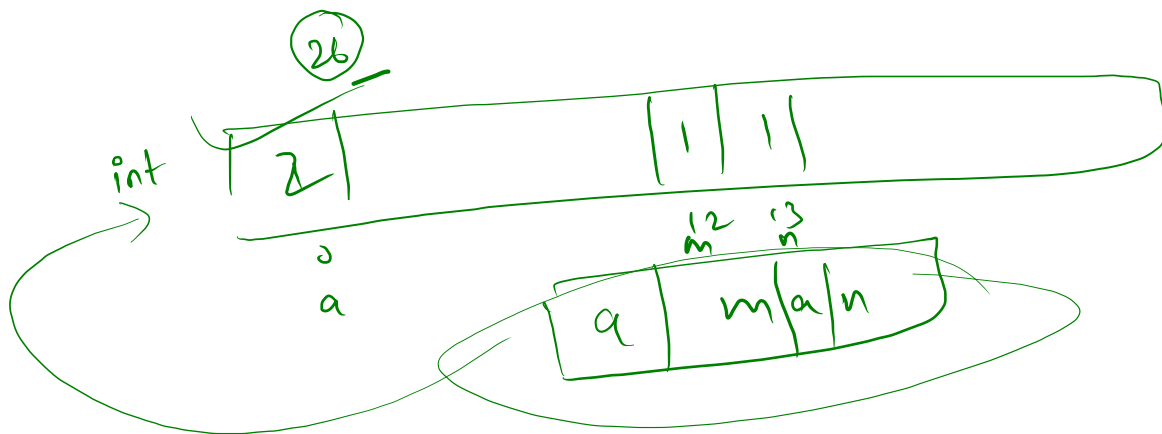
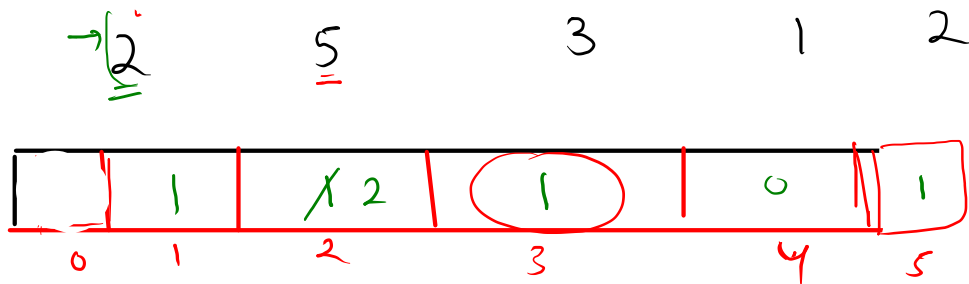
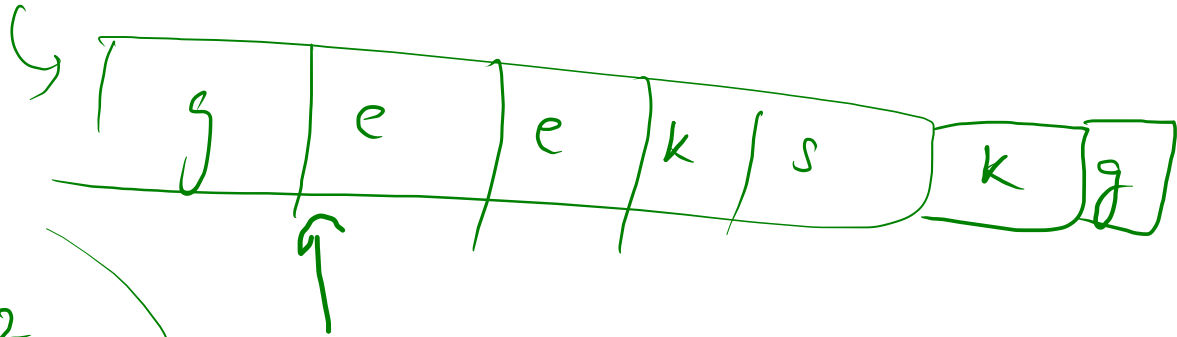


Diagram illustrating a sequence of values (2, 1, 1, 1) with corresponding indices (0, 1, 2, 3) and a value of 2 above the sequence.

Que.

char [] A



freq

g -- 2

e -- 2

k -- 2

s -- 1