

Largest Perimeter of triangle

Saturday, 20 November 2021

5:17 PM

Sides of triangle

Side 1 \rightarrow a

Side 2 \rightarrow b

Side 3 \rightarrow c

property of triangle.

Required
checking -

$$\left. \begin{array}{l} \checkmark a + b > c \\ \checkmark b + c > a \\ \checkmark a + c > b \end{array} \right\}$$

provide condition \rightarrow

$$a < b < \boxed{c}$$

Required
condition

Equivalent
condition.

if ($a + b > c$)
then no need
to check

for
checking

$$\left[\begin{array}{l} b + c > a \\ a + c > b \end{array} \right]$$

extra
add
on

Sides

Given condition \rightarrow

$$a < b < c, \quad 12 + 25 > 7 \Rightarrow$$

Required checking -

$$\cancel{a + b > c}$$

$$\left[\begin{array}{l} b + c > a \\ a + c > b \end{array} \right]$$

$$7, 12, 25 \quad 7 + 25 > 12 \quad \underline{\underline{7 + 12 > 25 \times}}$$

Ex: 3 6 2 3

Sort → 2 3 3 6

First group
Second group
Third

a b c

2 3 3 6

 a b c

$$a \prec b \prec c$$

$$3 + 3 > \cancel{6}$$

$$2+3 > 3 \quad] -$$

$$\begin{aligned} \text{perimeter} &= a + b + c \\ &= 2 + 3 + 3 \end{aligned}$$

Steps \rightarrow (1) Sort

③ Make a check for Every three element a, b, c }
that if $a + b > c$, then current
window is maximum.

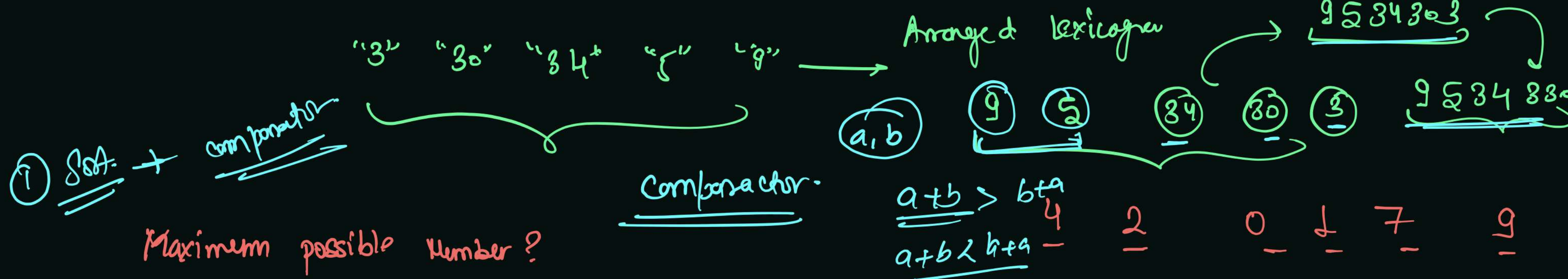
③ Make a check for Every three element a, b, c }
that if $a + b > c$, then current
window is maximum.

the integers array \rightarrow

3 30 34 5 9

\Rightarrow arrange all integers in such a way so that resultant number is maximum possible value from rearrangement.

$$\begin{array}{r} \overline{30} \quad \underline{3} \\ \hline 30+3 = 303 \\ \hline \underline{3} + \overline{30} = 330 \end{array}$$



lexicographical sort
 Sorting on string \rightarrow Array.sort(arr)

Every element of array is string

Max. possible Number from digit

decreasing order

9 7 4 2 10

5 9

4

Arrays.sort(arr, (a, b) -> {

Expectation:

3 30

String comparison:
"3" < "30"

return -1

Cancellation

Reverse order

a is smaller

a is greater

both are equal

5 9

return 9

d1 = 5 + 9 = "59"

d2 = 9 + 5 = "95"

d1 =
d2 =

a+b
3+30 = 330
30+3 = 303
b+a

make
b as
smaller than
a

(a+b) > (b+a)
return +ve

(b+a) > (a+b)
return -1

if ((a+b) > (b+a))

(a+b) > (b+a)

return +ve

a b c d e

30 3 if a is greater

330

+ve
-ve
0




He wants to know how big a square he can make using those sticks as sides. Since the number of sticks is large, he can't do that manually. Can you tell him the maximum area of the biggest square that can be formed?

Also, calculate how many such squares can be made using the sticks.


 $\rightarrow \text{Area} = 1 \times 1 = \underline{\underline{1}}$

HashMap <int, int>

freq. Map.

 $2 \times 2 = 4 \rightarrow 1$

The image shows two identical squares, each with all four sides labeled with the number 3. To the right of the squares is a vertical line segment. Below the squares, the calculation $8 \times 3 = 9$ is written, with the number 9 circled. To the right of this, the number 2 is circled.

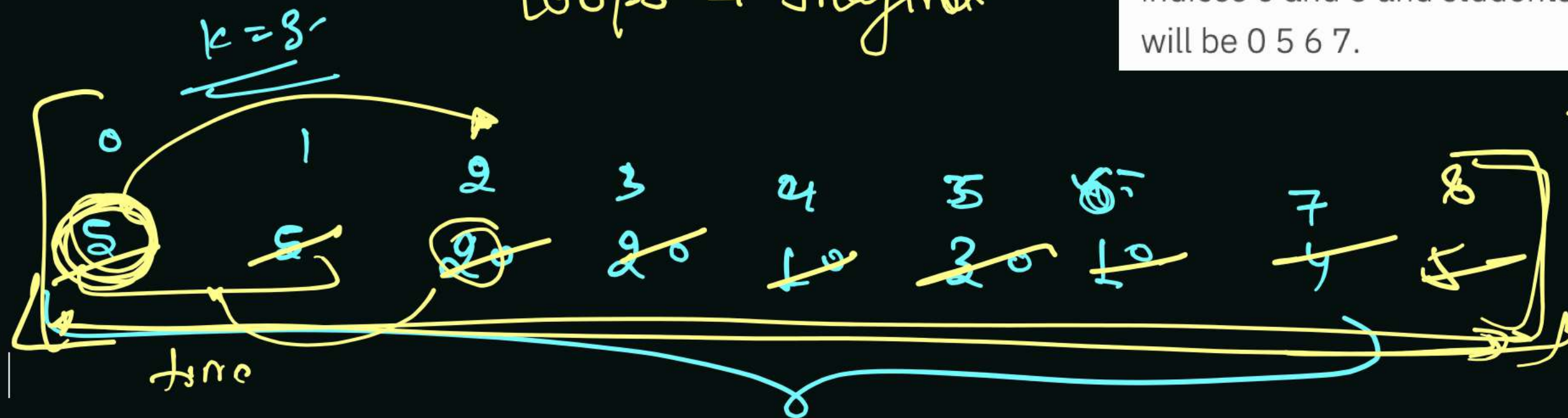
$$\begin{array}{c} \boxed{} \\ \sim \\ x \end{array}$$

pattern

Time and Space

* Index print (0-based)

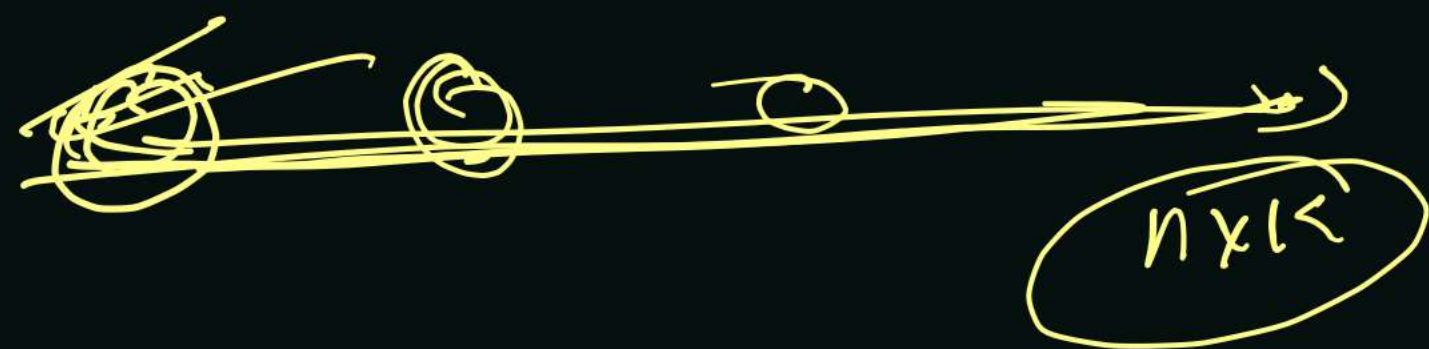
Loops → Imagined



Set \rightarrow

7	0	1	8	4	5	2	3	6	0	1	2	3	-
4	5	5	5	10	10	20	20	30					

Diagram illustrating a set structure with elements and their corresponding values. The elements are 7, 0, 1, 8, 4, 5, 2, 3, 6, 0, 1, 2, 3, and -. The values are 4, 5, 5, 5, 10, 10, 20, 20, 30, and so on. A bracket indicates a relationship between the first three elements (7, 0, 1) and their values (4, 5, 5).



Rob - K move -

$$\begin{bmatrix} 98 & \rightarrow & 4 \\ 95 & \rightarrow & 2 \\ 93 & \rightarrow & 2 \end{bmatrix}$$
