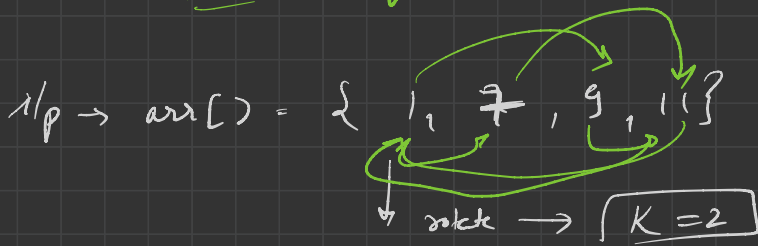



8-1 → Rotate Array



o/p → { 9, 11, 1, 7 }

i/p → [-1, -100, 3, 99]
K=2

o/p → { 3, 99, -1, -100 }

rotated array

0 ————— (n-1) 1th

$n^{th} \% n = 0$

% → $\boxed{\% n}$ → arr[o/p] → [0 — (n-1)]

%10 → [0 — 9]

43 % 10 = (3) 55 % 10 = (5)

53 % 10 = (3)

70 % 10 = 0

$$\{ \overset{0}{11}, \overset{1}{12}, \overset{2}{13}, \overset{3}{14}, \overset{4}{15} \} \quad \boxed{K=3}$$

$n-1 \quad n \quad n+1 \quad n+2$

$$(n+2) \% n = \boxed{2}$$



$$\text{arr}[(i+K) \% n] = \text{arr}[i]$$



Cyclic way we K position

ie shift K index (ith term 160)

$$\text{nums} = \{ \overset{0}{11}, \overset{1}{12}, \overset{2}{13}, \overset{3}{14} \} \quad k=2$$

$$i=0$$

$$\text{nums}[(i+k) \% n] = \text{nums}[i]$$

$$\hookrightarrow \text{nums}[2] = \text{nums}[0]$$

⁰ 11	¹ 12	² 11	³ 14
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$$i=1$$

$$\text{nums}[3] = \text{nums}[1]$$

⁰ 11	¹ 12	² 11	³ 12
--------------------	--------------------	--------------------	--------------------

$$i=2$$

$$\text{nums}[0] = \text{nums}[2]$$

11	12	11	12
----	----	----	----

temp

1	1	1	1
---	---	---	---

$$i=3$$

$$\text{nums}[1] = \text{nums}[3]$$

11	12	11	12
----	----	----	----

↓
Overwrite

$$\text{nums} = \{ \overset{0}{1}, \overset{1}{2}, \overset{2}{\textcircled{3}}, \overset{3}{\textcircled{4}} \}$$

$$i = 0$$

$$\text{temp}[(i+k) \% n] = \text{nums}[i]$$

$$\text{temp}[2] = 1$$

0	1	2	3
		1	

$$i = 1$$

$$\text{temp}[3] = \text{nums}[1]$$

0	1	2	3
		1	2

$$i = 2$$

$$\text{temp}[0] = \text{nums}[2]$$

0	1	2	3
3		1	2

$$i = 3$$

$$\text{temp}[1] = \text{nums}[3]$$

0	1	2	3
3	4	1	2

rotated by 2 places

Q-2

arr[] \rightarrow { 3, 4, 5, 1, 2 }

Ist \rightarrow { 1, 2, 3, 4, 5 } 1 pair \rightarrow $\text{num}[i-1] > \text{num}[i]$

IInd \rightarrow { 3, 4, 5, 1, 2 } 1 pair

IIIrd \rightarrow { 3, 5, 7, 1, 6 } 2 pair

true \rightarrow 1 pair [above condⁿ]

3 5 7 1 6

Diagram showing three pairs of numbers connected by lines, representing the pairs (3, 5), (5, 7), and (7, 1) or (1, 6).

IVth \rightarrow { 1, 1, 1 } 1 pair = 0

count = 0 // 1 \rightarrow true
else \rightarrow false

arr 1 =

1	2	3	4
---	---	---	---

arr 2 =

1	6
---	---

1 2 3 4
6
1 2 4 0

1

1	2	3
---	---	---

9	9
---	---

2	2	2
---	---	---

Ist call
→

1	2	3	4
			6

IInd call
→

1	2	3	4
			6

2	4	0
---	---	---

↓

0	4	2	1	1
---	---	---	---	---

↓
alter

IIIrd
→

9	9	9
9	9	9

Carry
over

$$\begin{array}{|c|c|c|} \hline 1 & 1 & 1 \\ \hline \end{array}^i$$

$$\begin{array}{|c|c|c|} \hline 2 & 1 & 3 \\ \hline \end{array}^j$$

$$\underline{\underline{\text{carry} = 0}}$$

$$\text{sum} = 1 + 3 = 4$$

$$\underline{\underline{\text{carry} = \text{sum} / 10}}$$

$$\underline{\underline{\text{sum} = \text{sum} \% 10}}$$

$$\underline{\underline{\text{ans}[i] = \text{sum} =}}$$

$$\begin{array}{r} (1) \\ 19 \\ 9 \\ \hline (8) \end{array}$$

$$\frac{18}{10} = (1)$$

$$180 / 10 = (8)$$