

Rotate an Array By N $N=3$

a b c d e | f g h
 P_1 P_2

Reverse P_1 & P_2

e d c b a | h g f

Reverse entire

f g h a b c d e \rightarrow Rev Array

$P_1 + P_2$
 $P_1', P_2' \rightarrow$ Reverse
 $(P_1' + P_2')^1$
 $P_2'' P_1''$
 \downarrow
 $P_2 P_1$

a b c d e | f g h $K=3$
 0 1 2 3 4 | 5 6 7 $a.length = 8$

$P_1 \rightarrow [0 - a.length - 1 - K]$
 $P_2 \rightarrow [a.length - K \dots a.length - 1]$

Imp

Do mod first
 then make them
 convert the -ve value

With Extra Space

Loop $[n.length - K; n.length]$

Loop $[0, n.length - K - 1]$

VV Imp

$K > \text{nums.length}$ $K=6$
 a, b, c, d, e,

$6 \% 5 = 1$

only 1 rotation is required

$K < 0$ $K = -1$

a, b, c, d, e

\rightarrow b, c, d, e, a

$K = K + \text{nums.length}$
 $= -1 + 5$
 $= 4$

e a b c d 1

d e a b c 2

c d e a b 3

b c d e a

which means

$K = -1 = K = 4$

So, for $K < 0$

$K = K + \text{nums.length}$