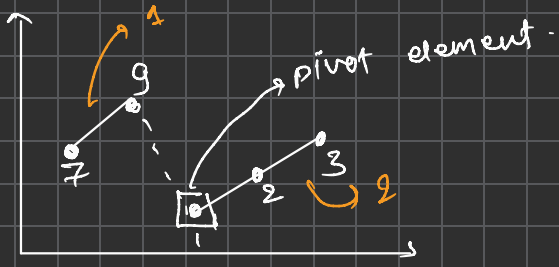
Q) find pivot element:

① sorted array was there [1,2,3,7,9]

② Rotate that array by n=(2) [7,9,1,2,3]

③ So here Graph will be:-



Algo:

① $mid = s + \frac{(e-s)}{2}$

② condition 1: arr[mid] >= arr[0]

↳ s = mid+1 (bcz here the mid will lie on first line.)

③ condition 2: else e = mid

(bcz here the mid will lie on second line)

and if i do e = mid-1 then e will go on first line if the mid was at pivot element)

→ return s;

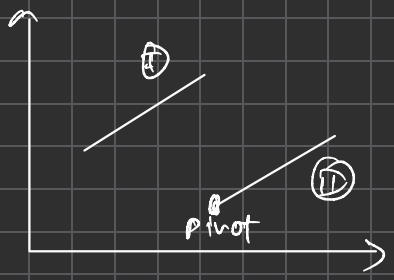
Q: Code studio: Search in Rotated Sorted Array.

→ Algo: ① find pivot

if arr[pivot] ≤ Target ≤ arr[n-1]

↳ binary search in (II).

else binary search in (I)



Q leet code 69: sqrt(x)

Ans: i/p → 27

→ T.C = $\sqrt{N}$, we want (log N)

Brute force

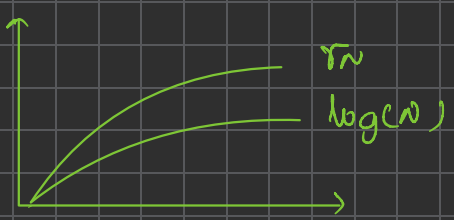
1 → 1^2

2 → 2^2

3 → 3^2

⋮

5 → 5^2



Another Approach: → 27

$\sqrt{27}$ ans ⇒ 0 _____ 27

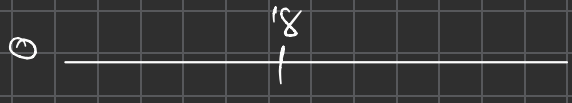
92

$\sqrt{92}$ ans → 0 ——————— 92

↑ Search space

Algo: → while (s <= e)

n = 36



mid = s + (e-s)/2 ⟶ mid * mid < n

18 * 18 = 324 > 36

∴ e = mid - 1

∴ s = mid + 1

ans = mid

mid * mid = n

return mid

→ return ans.

↳ for float part:

$\sqrt{37}$ → 6.(1)9

6 =

6 → .1

6.1 ← $(6.1)^2$ < 37 ⇒ ans

6.2 → $(6.2)^2$ < 37 ⇒ ans

6.3 → $(6.3)^2$ > 37

then add 0.01 in ans.

$6.21 \to (6.21)^2 < 37 \Rightarrow$ ans

↳ $6.22 \to (6.22)^2 > 37$

→ rechercher ans.