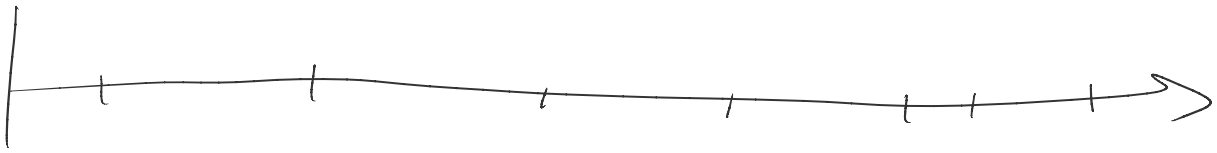
02

Sunday, February 27, 2022 10:20 PM

1 7 12 17 20 25 30 35 40



$5 \times 10^5 \times 10^5$

10 ⟷ 30

720 = 2×
3×
4×

T.N.Q

N √N

2×3×4×5×6

→ 720 = $2^4 \times 3^2 \times 5^1$

[2 3 5 7 11 13 17 19 23 29 31 ....]

6!

$x^a \cdot x^b = x^{a+b}$

2 | 96
2 | 48
2 | 24
2 | 12
2 | 6
3 | 3
1

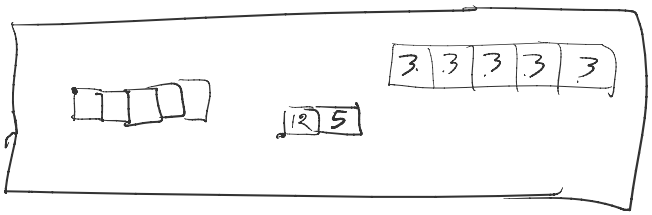
$= 2^5 \times 3^1$

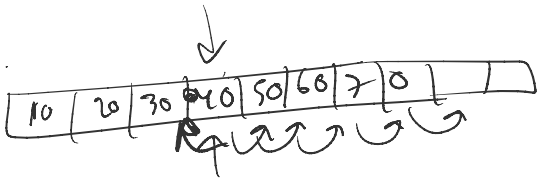
N!

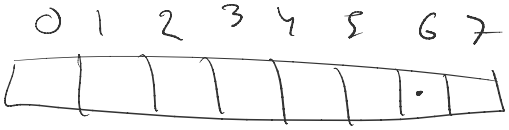
→ 1×2×3×4×5×6

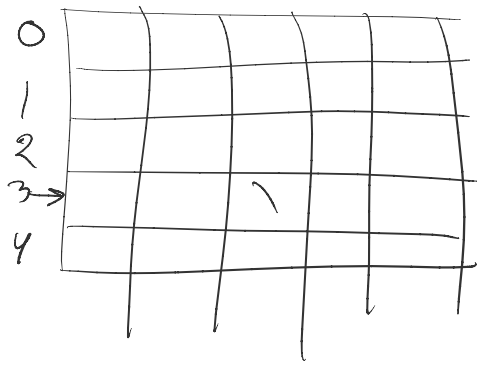
→ $= (2^1) \times (3^1) \times (2^2) \times (5^1) \times (2^1 \times 3^1)$

$= 2^{1+2+1} \times 3^{1+1} \times 5^1$









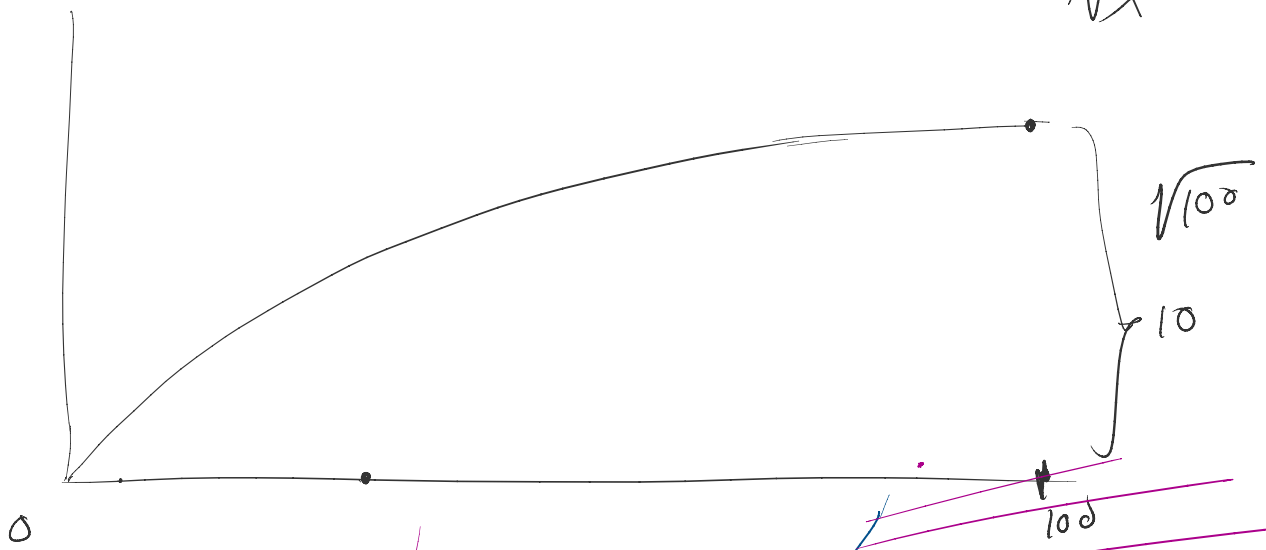
$O(N)$

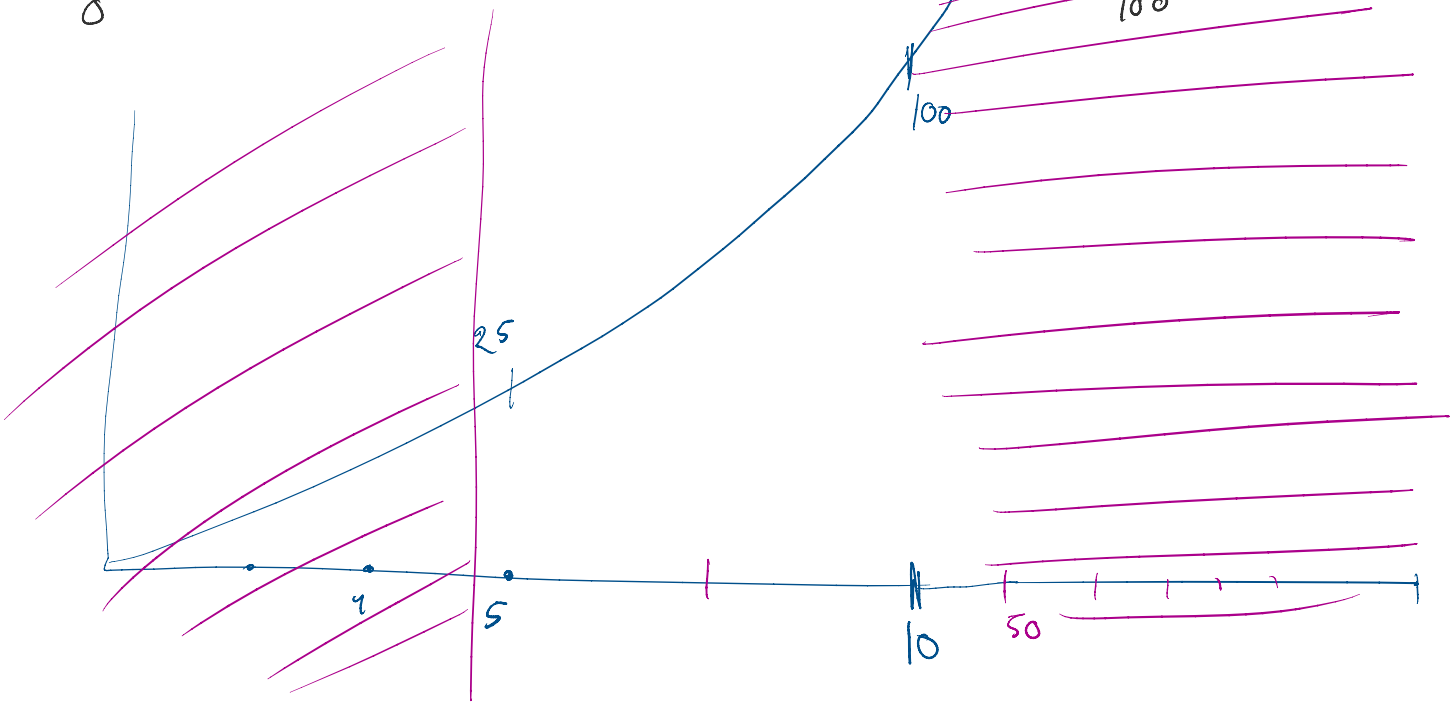
$\sqrt{100}$

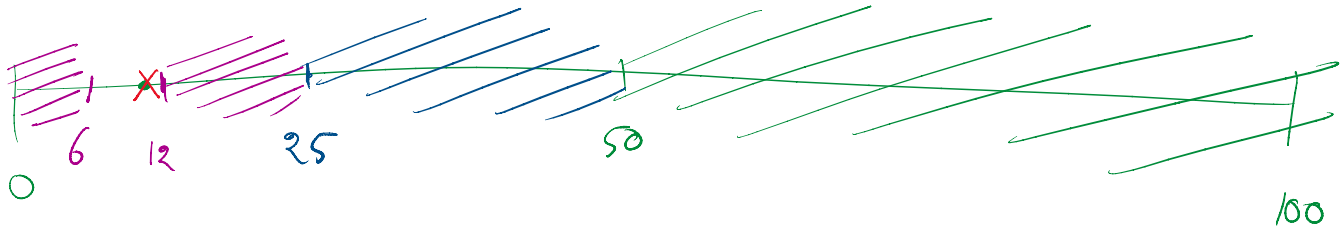
$y = \sqrt{x}$ $y = x^2$

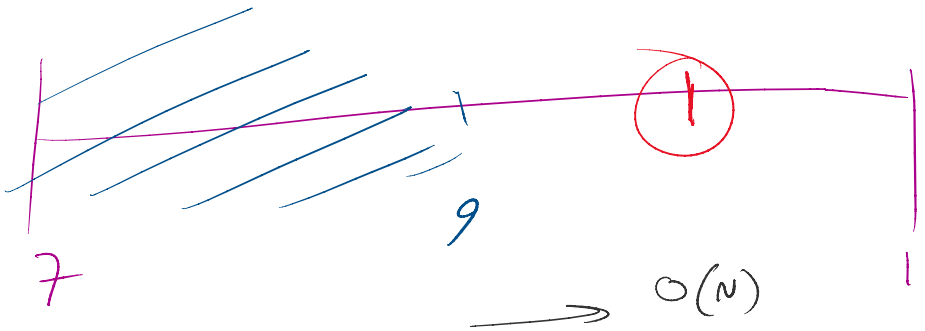
2×2 3×3 4×4

$\sqrt{x}$

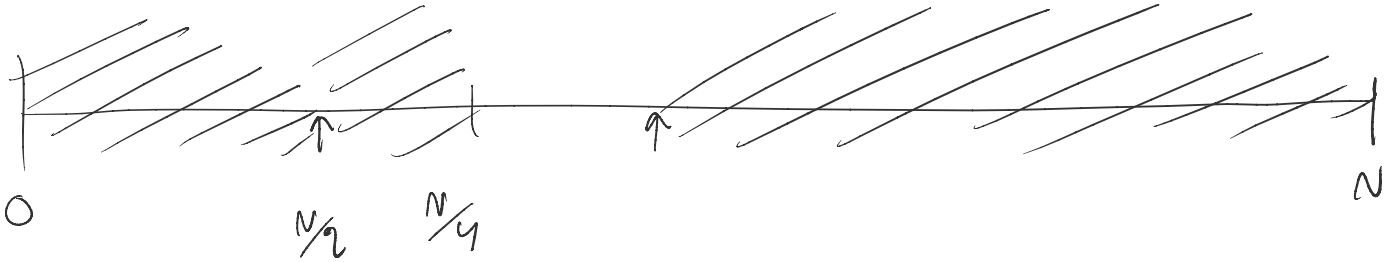








$\rightarrow O(N)$

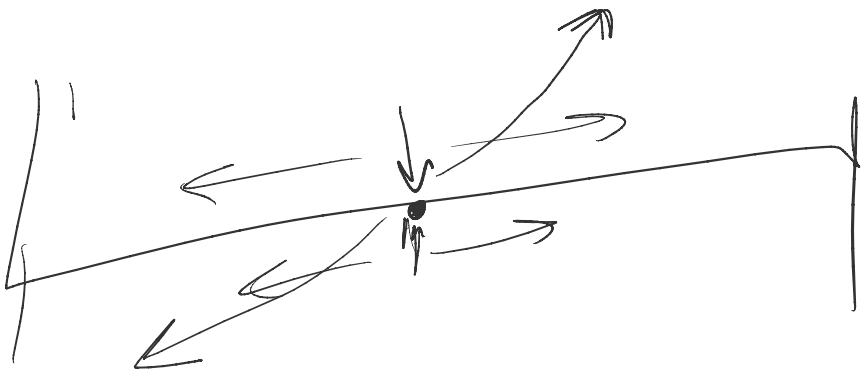


1 2

1 2 3 x

$N/2$ $N/4$ $N/8$ .....

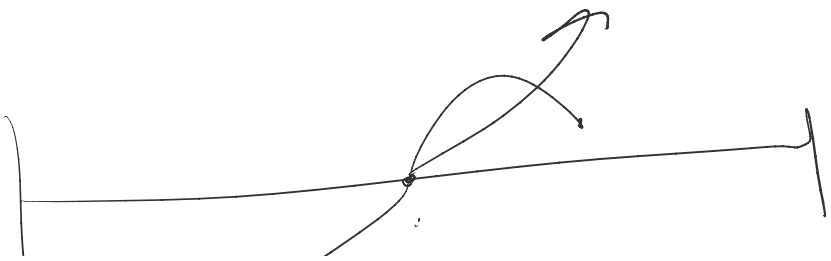
$N/2^1$ $N/2^2$ $N/2^3$ $N/2^x \leq 1$

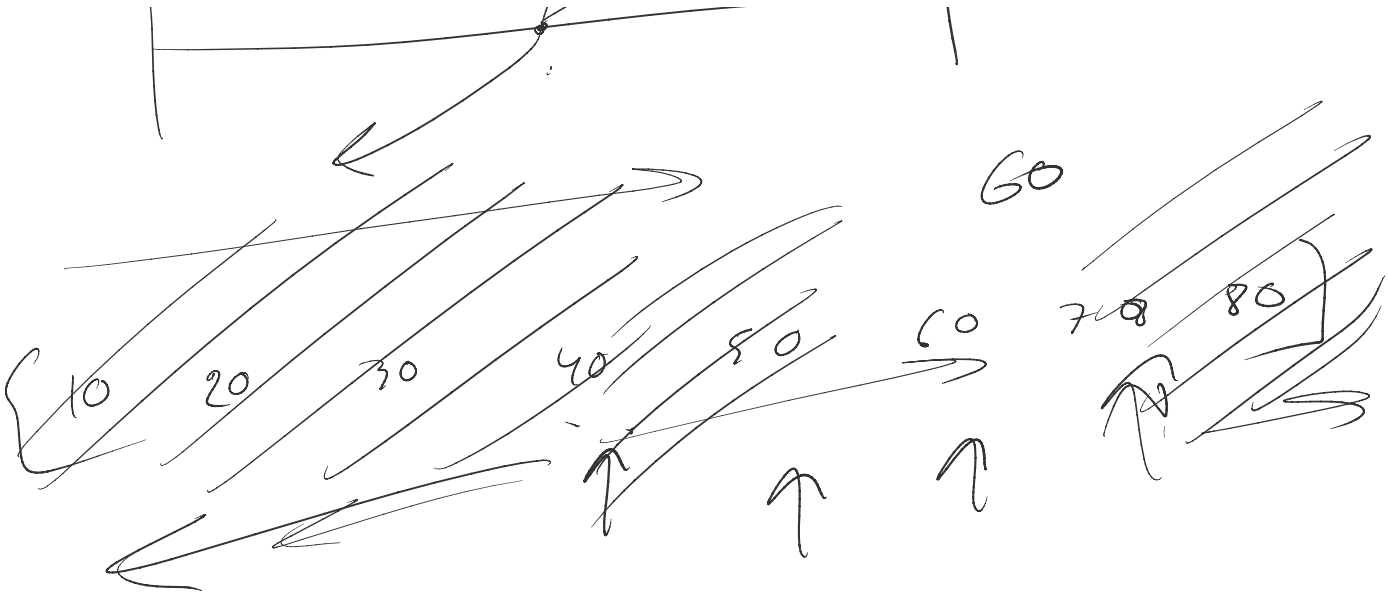


$N/2^x \simeq 1$

$N \simeq 2^x$

$x \simeq \log_2 N$




60
10
20
30
40
50
70
80