

③  $A, B, C$

$$\rightarrow \boxed{(3 \times 2 \times 1)} \rightarrow 6$$

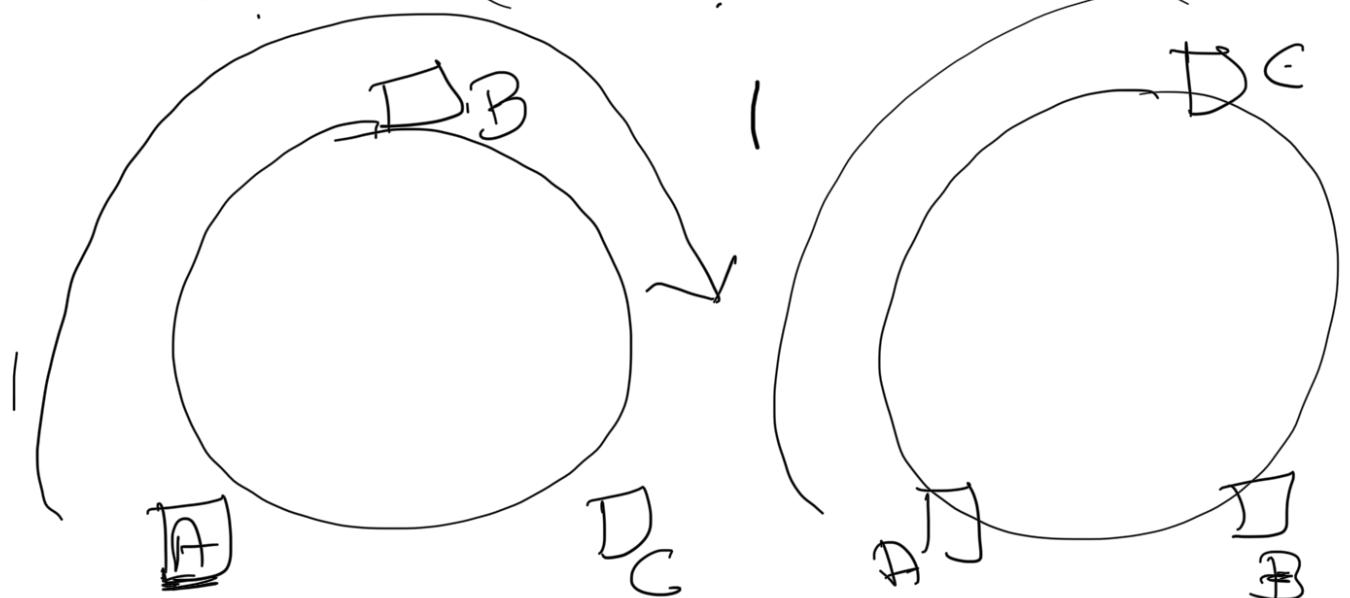
$\rightarrow 3 \quad P_3 \quad \rightarrow 6$

$$\underline{3} \quad \underline{2} \quad \underline{1} \Rightarrow 6$$


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$$\rightarrow n! \Rightarrow (n-1)!$$

$$3! \rightarrow (3-1)! \Rightarrow 2 \Rightarrow (2-1)!$$



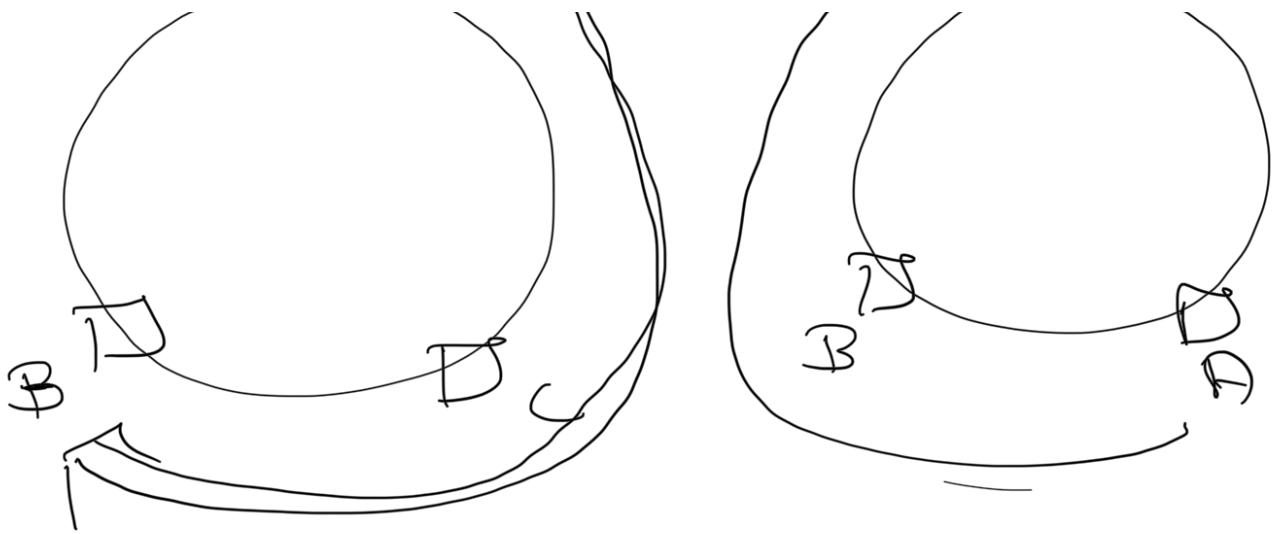
$A \quad B \quad C$

$A \quad C \quad B$

$\cancel{A \quad B \quad C}$

$\cancel{A \quad B \quad C}$

$\cancel{B \quad C \quad A}$



A C B

A B C

(n-1)!

$\Rightarrow 3$



$$\underbrace{\frac{6}{6} \frac{6}{6} \frac{6}{6} \frac{6}{6}}_{SSSSSS} \Rightarrow 6^{**6}$$

SSCCSS

$$\underline{6} \underline{5} \underline{4} \underline{3} \underline{2} \underline{1} \Rightarrow 6!$$

→ → → → DC →

$\rightarrow$   $(A) \subset \pi_2, \pi_3$

$$\begin{array}{c} \oplus \\ \overline{\quad} \\ \text{?} \\ \overline{\quad} \\ \text{?} \end{array}$$



CALERS  
CALERS

$$\begin{array}{c} \oplus \\ \overline{\quad} \\ \text{?} \\ \overline{\quad} \\ \text{?} \end{array} \text{ SCALERSA}$$

~~S<sub>1</sub> S<sub>2</sub> S<sub>3</sub>~~  
~~A<sub>1</sub> A<sub>2</sub>~~

$\text{SCALER}$   
1 unit      4 unit

SC

$A_L \text{ } \text{ } \text{ } \text{ } E R$

SC

$5! \times 2!$

$A_L \text{ } \text{ } \text{ } \text{ } E R$

A I AF

( ) ( ) ( )

3! 8! 4! 4!

① I D DF  
of

F U Z Z T O N E

St 1

\* All the Vowels Together

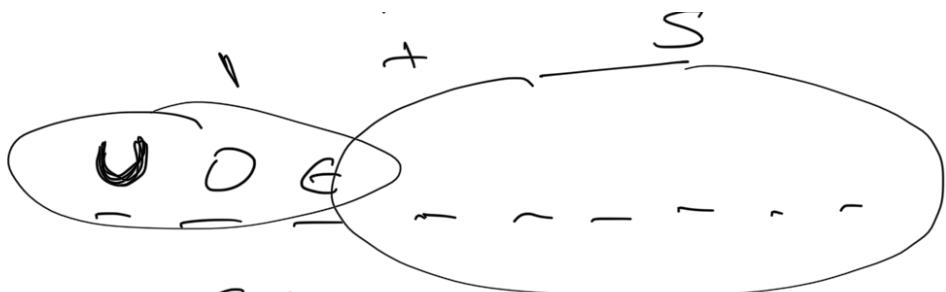
3! 6!  
Q!

② O E U C O C  
A U O C O  
Q!  
3? \* 6!

V V V  
F U Z Z T O N E

Q!  
Q!

O O E  
U O E  
Unit



$$\frac{6!}{3!} \times 3!$$

$A \ni [1, 2, 3]$

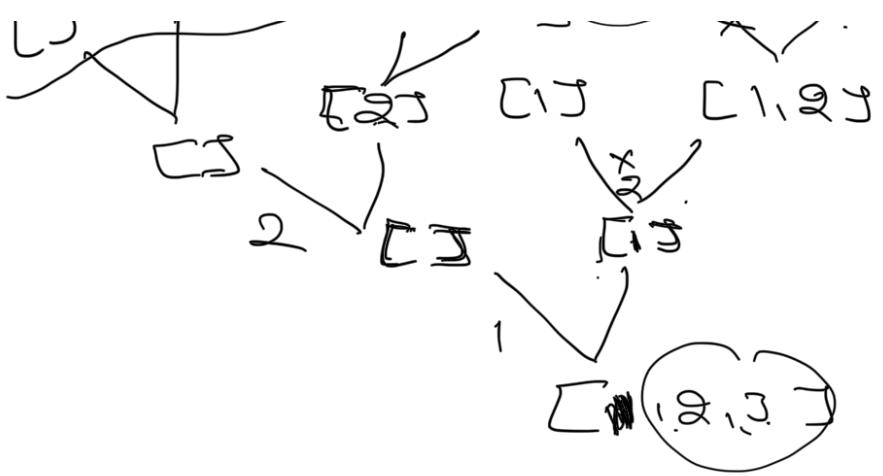
$\Rightarrow [$

$[ ]$        $[2]$   
 $[1]$        $[2, 3]$   
 $[1, 2]$   
 $[1, 3]$   
 $[1, 2, 3]$

Subset

Subsequence





U

$\square \rightarrow A$

$A \square$

$A \Rightarrow \square [1, 2, 3]$

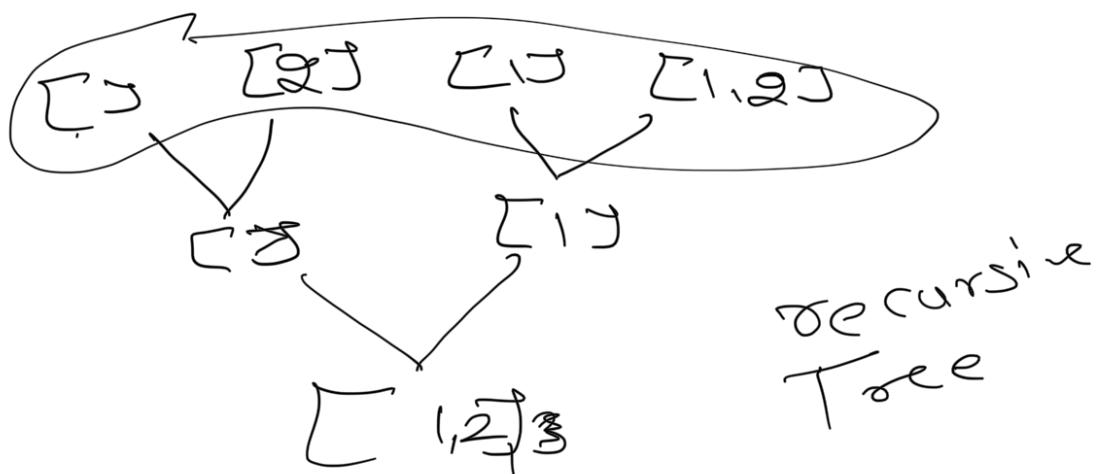
$\Rightarrow \square \Rightarrow \square [1], \square [2, 3]$   
 $\square [1], \square [2, 3]$

$\square [1, 2, 3], \square [3]$   
 $\square [1], \square [3]$

$(g(\square [A[1:]]), \square [.] + A[\square])$

$f(A[1:3], \{j\})$

$\rightarrow$  if A



Recursive  
Tree

Def  $f$  get-subset( $A$ , subset =  $\{\}$ )

$\downarrow$

Def  $f$  get-sub( $A$ , subs =  $\{\}$ ):

if  $\text{len}(A) == 0$   
point(subs)

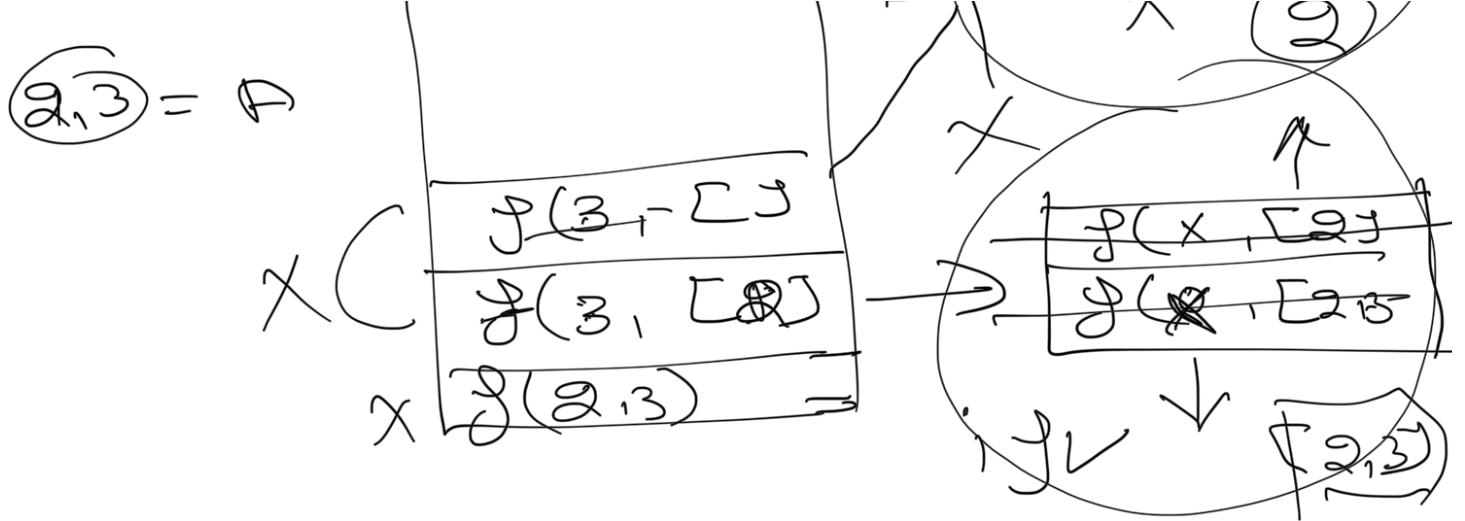
else:

get-sub( $A[1:J]$ , subs +  $\{A[0:J]\}$ )  
get-sub( $A[1:J]$ , subs)

$A[1:J] \Rightarrow$

$f(x, \{1\})$   
 $f(x, \{3\})$

$\{3\}$



$f(A \rightarrow C), [1, 2, 3]$

$$f(1, 2, 3) = H \cdot w$$

Time Complexity

$\Rightarrow O^{**}$

$\Rightarrow Q$

$$\Rightarrow 2^{**10} \Rightarrow 2^{**13}$$

$1 + , 2, 3$

$$2^1 \quad \quad \quad 2^3$$

$$2 \quad \quad \quad 2$$


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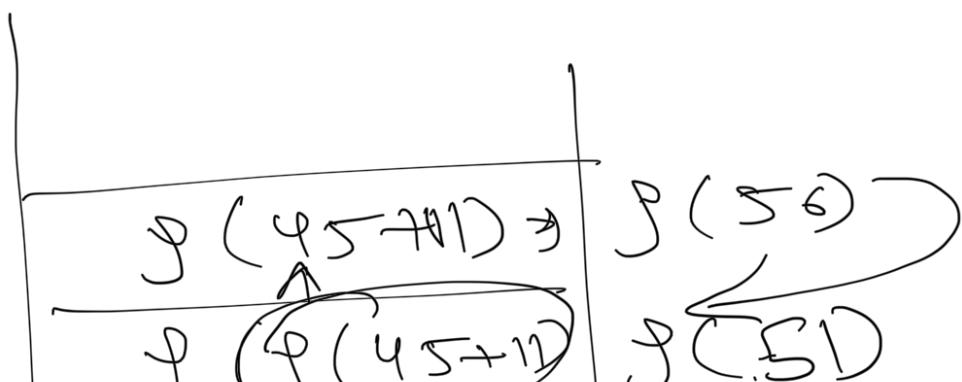
def  $f(n)$ :

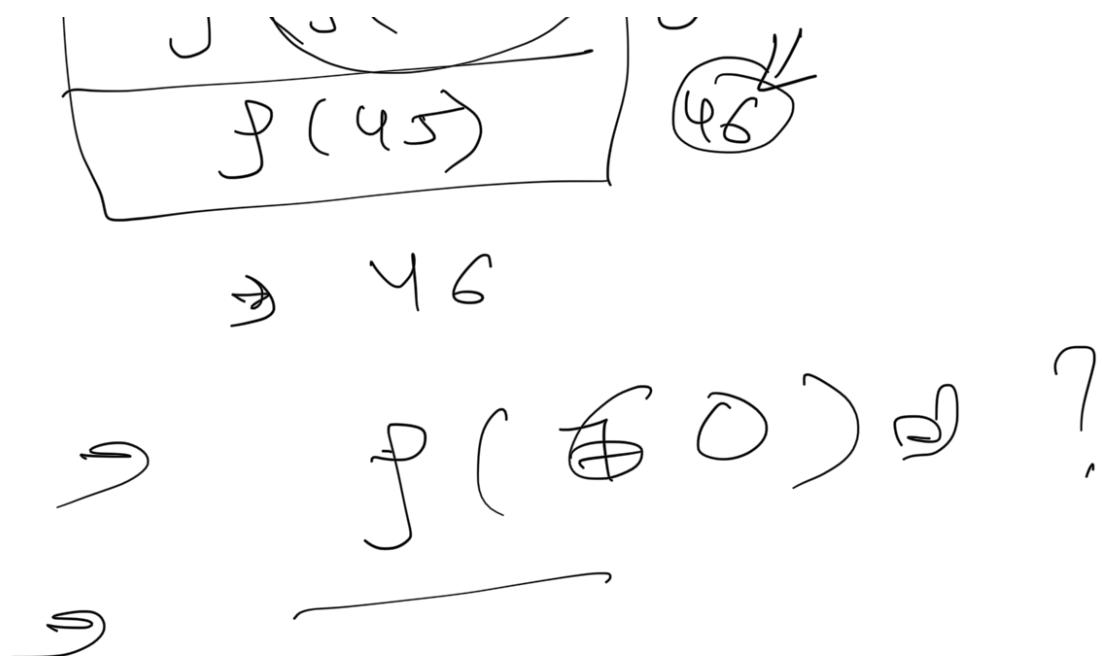
if  $n > 50$

$\text{out } (n-5)$

out  $f(f(n+11))$

print( $f(45)$ )





Def. reverse ( $\in^* AB \in^*$ ;  $\sigma \circ \tau = \tau \circ \sigma = \epsilon$ )

if  $\text{Rem}(\text{Sto1}) == 0$   
get  $\text{dev}_{\text{Sto}}$

else  
    at     reverse( str[1:] ), rev  
                + str[0]

$\int A$

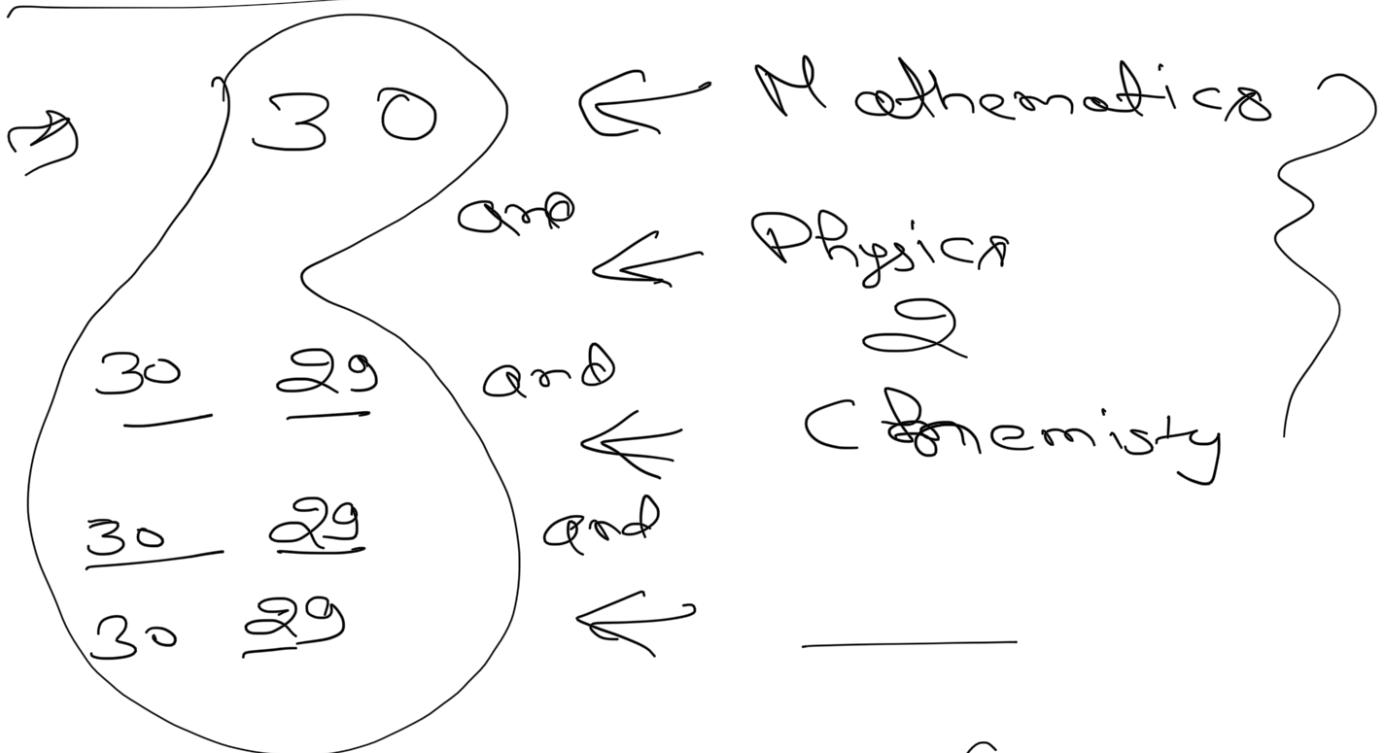
$\cancel{\int F(C), CBA}$

$\cancel{\int F(C, BA)}$

$\cancel{\int BC, A)}$

$\cancel{\int(ABC, 11)}$

CBA



$$\frac{30 \times 29 \times 30 \times 29 \times}{30 + 29 + 30 + 29 + 30} \quad (\text{Multiplication})$$
$$(\text{Addition})$$

② Recursion Stack  
or  
Tree

f(1, 2, 3)

③ Given two A and B

$\Rightarrow f(60) \Rightarrow$  Output

$\Rightarrow$  Time - Complexity  
Recession

$\Rightarrow$  Hashing Question