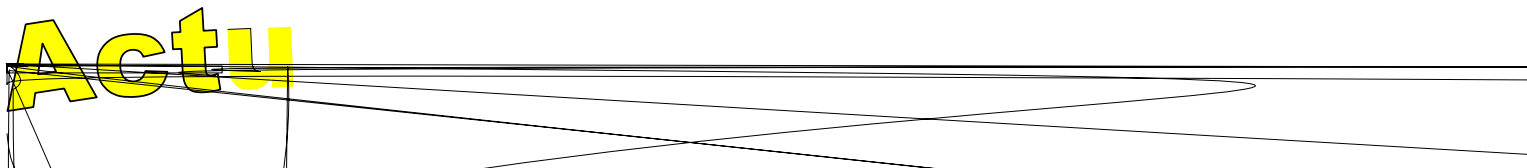
H

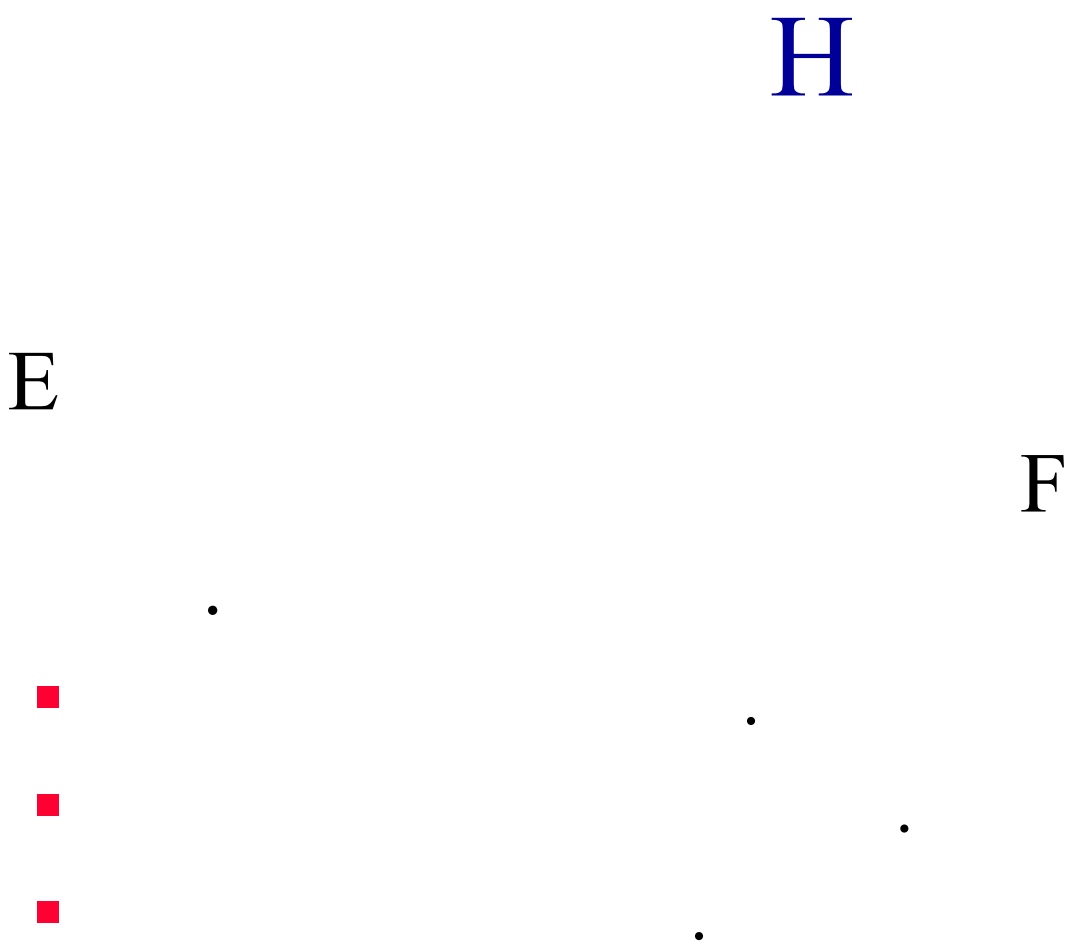
	Fibonacci	Pairing
Insert	O(1)	O(1)
Remove min (or max)	O(n)	O(n)
Meld	O(1)	O(1)
Remove	O(n)	O(n)
Decrease key (or increase)	O(n)	O(1)



H

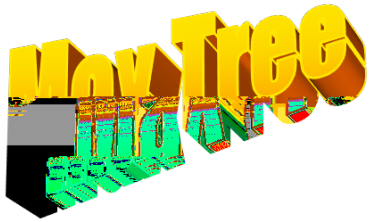
	Fibonacci	Pairing
Insert	O(1)	O(log n)
Remove min (or max)	O(log n)	O(log n)
Meld	O(1)	O(log n)
Remove	O(log n)	O(log n)
Decrease key (or increase)	O(1)	O(log n)

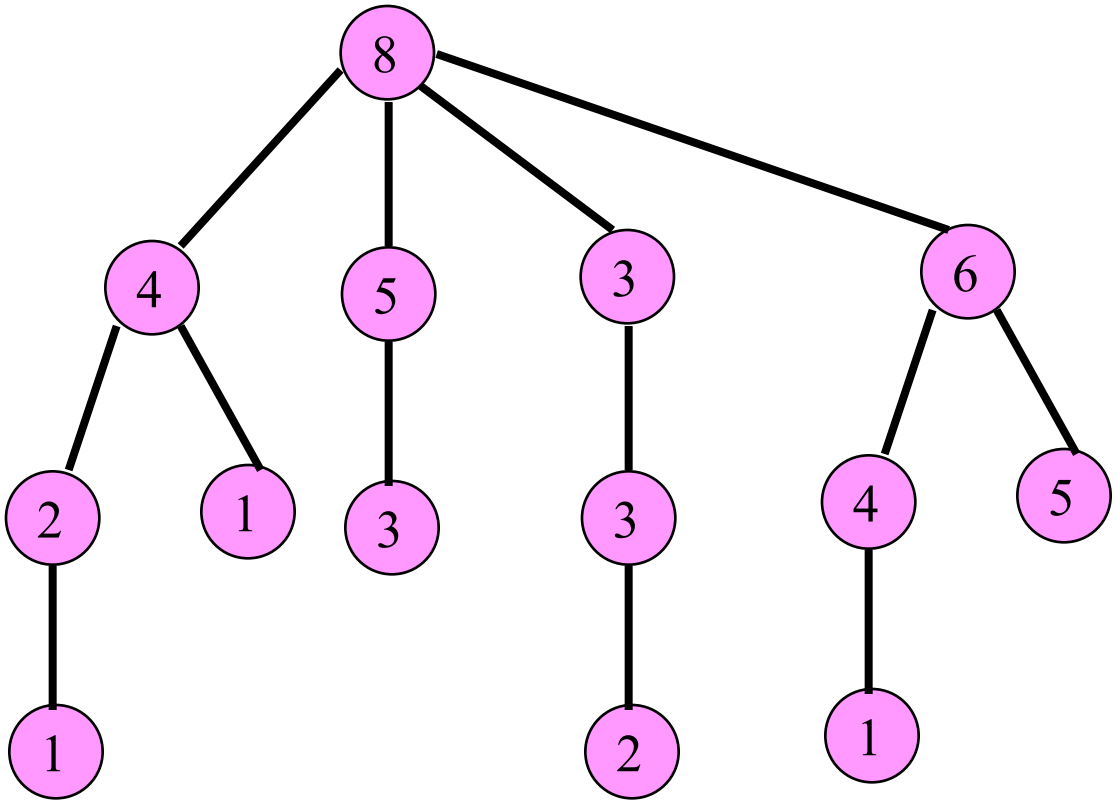
Amortized Complexity


H
E
F

D

A ( ) ( ) .





C

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D

: , D , C C

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H

C -

- C .
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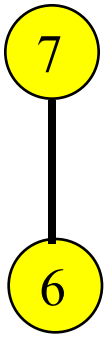
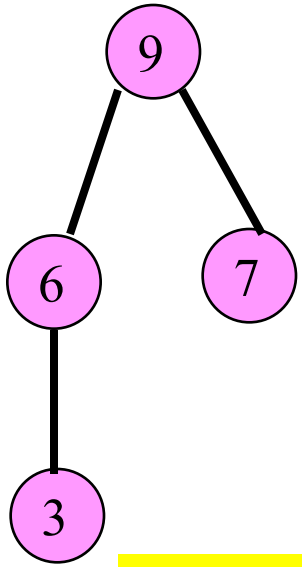
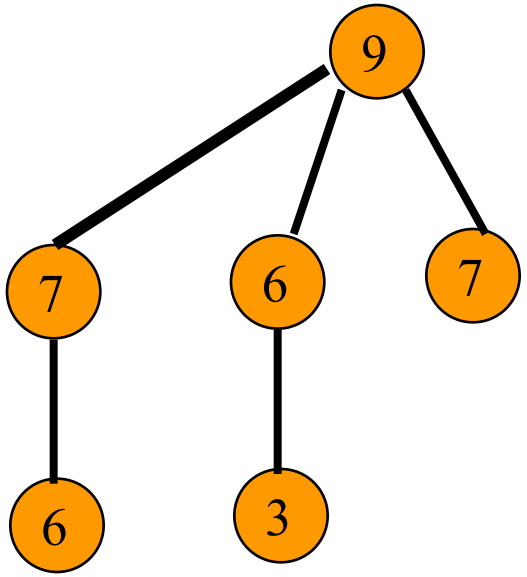


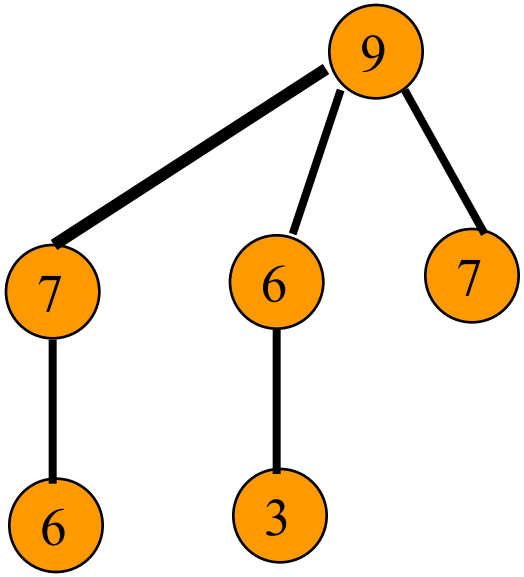




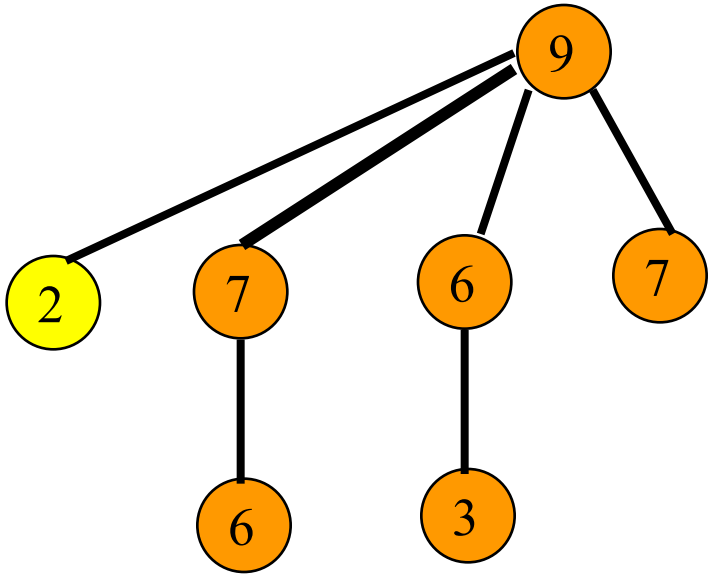
A = (1).

I

C 1-

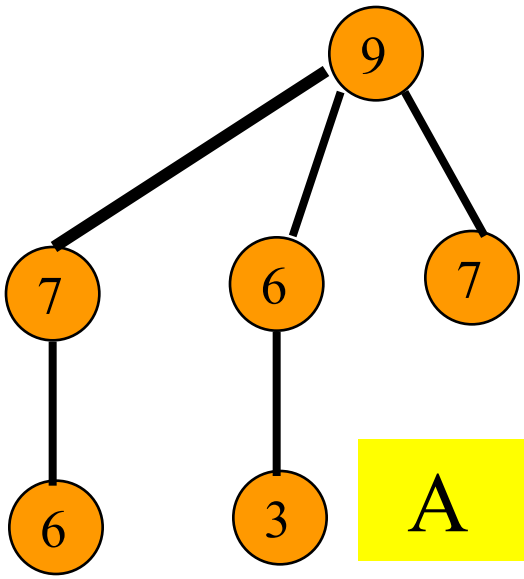


(2)

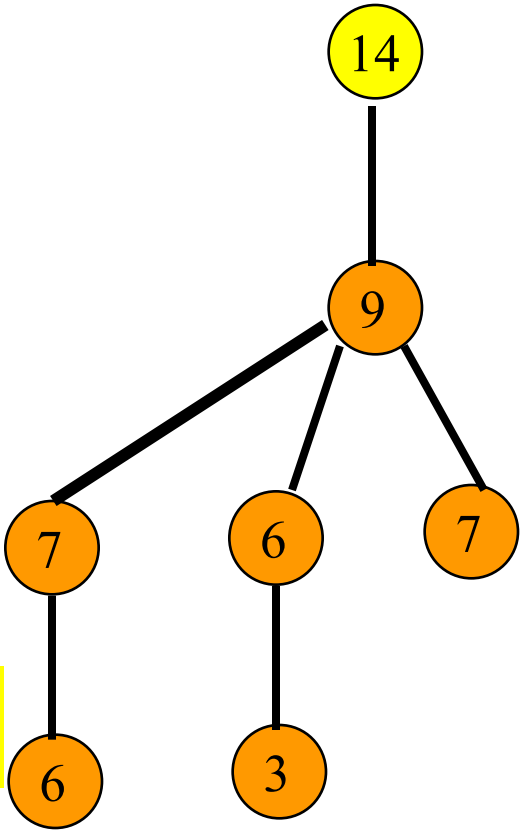


I

C 1-



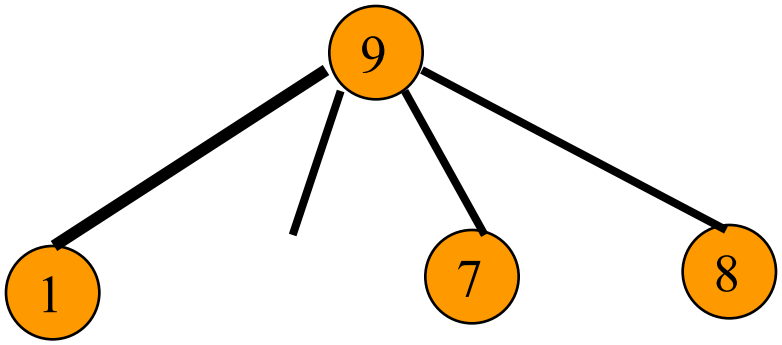
(14)



A = (1).

-C D

I 9, 8, 7, , 1, .



- = 1

-C H

I 1, 2, 3, , , .

- =

I (, A)

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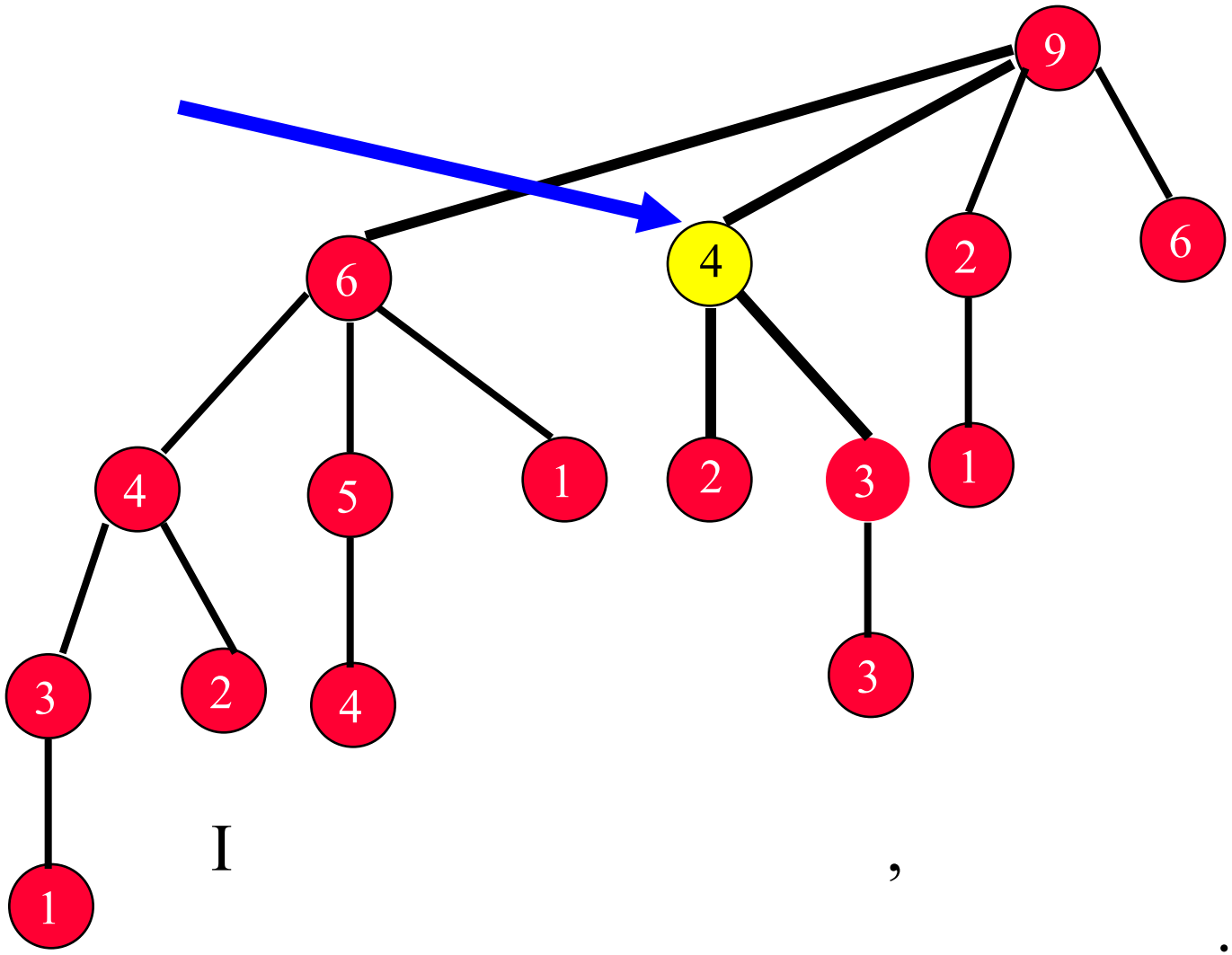
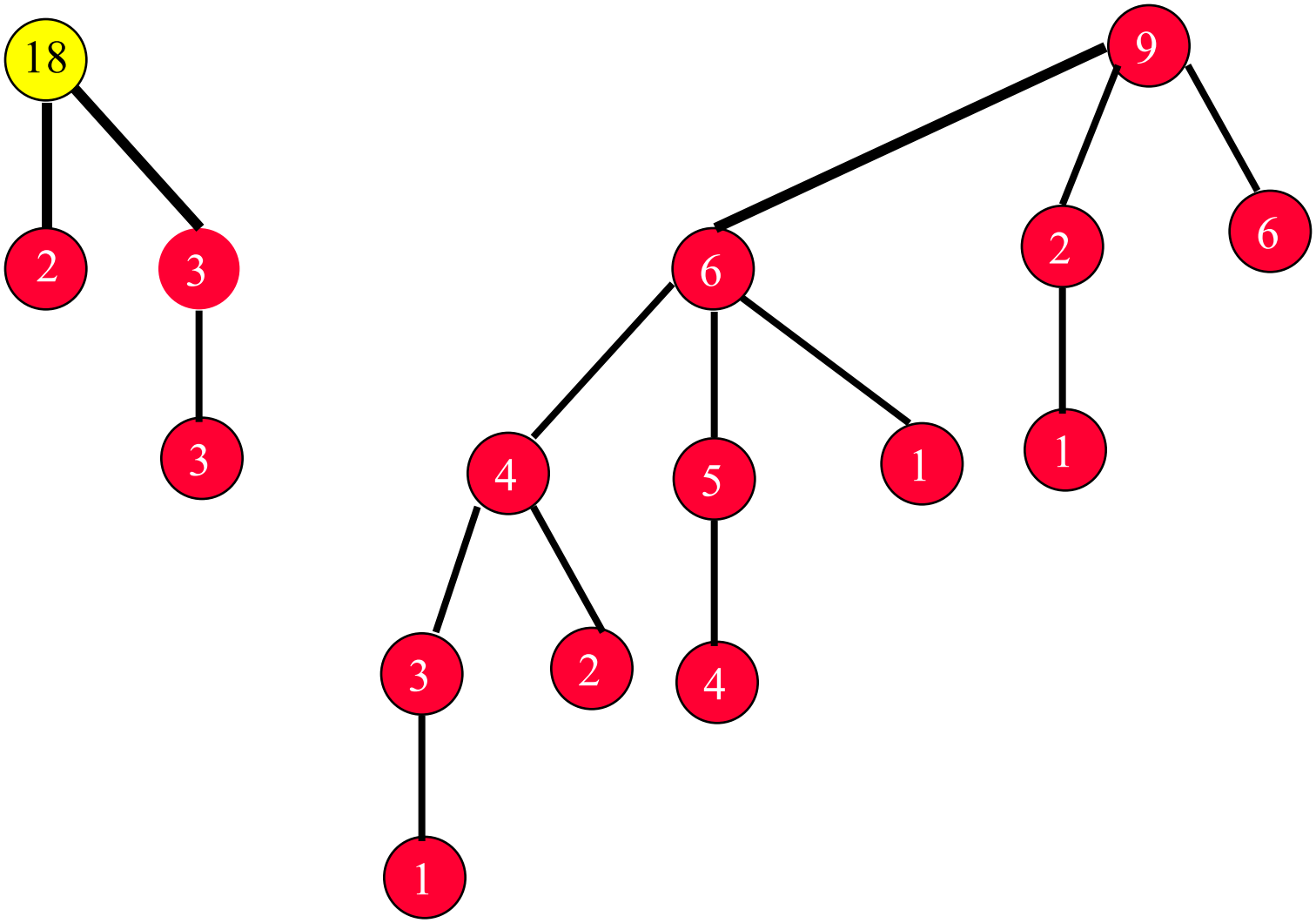
I (, A)



I , .

I (, A)



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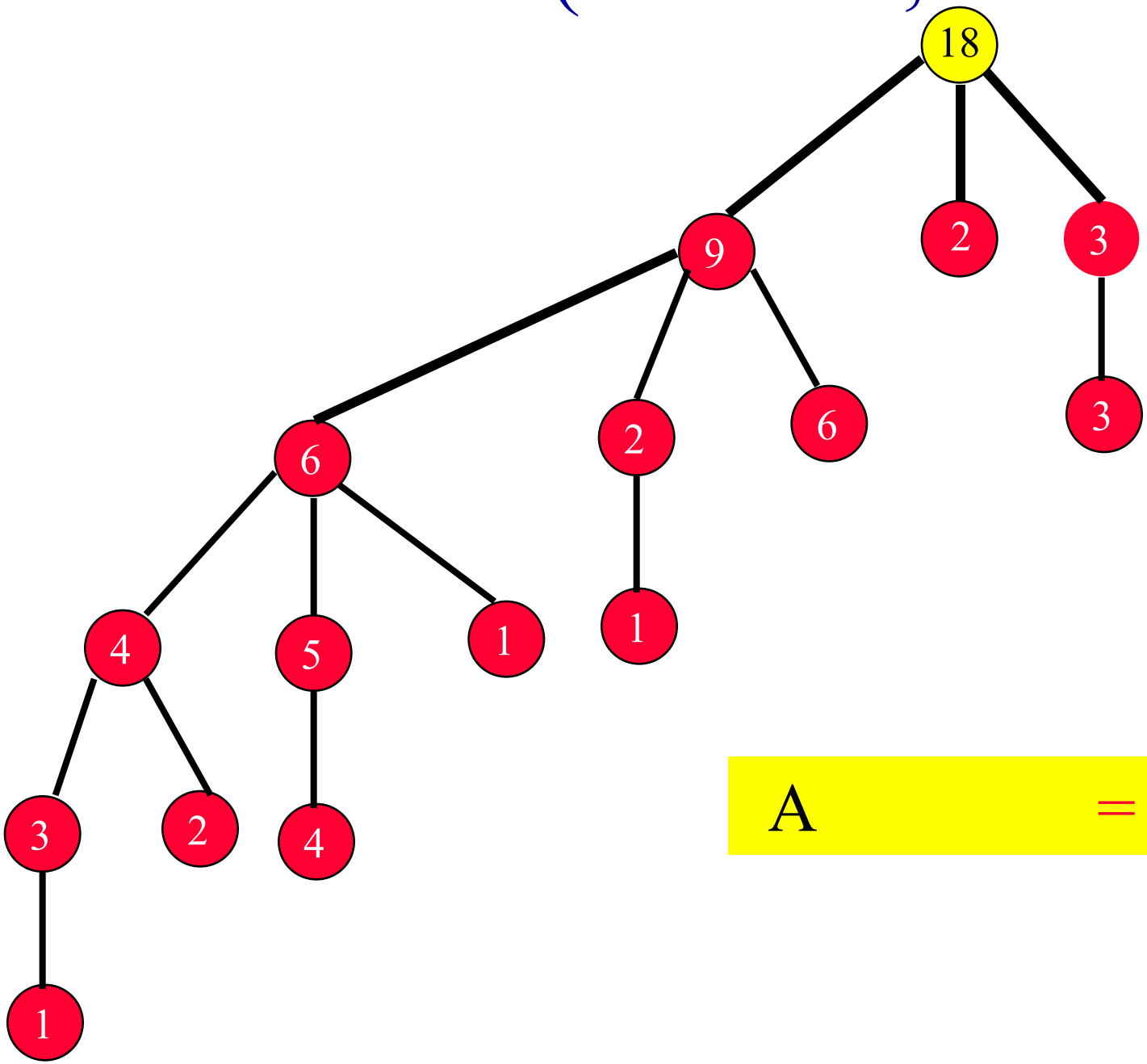
I (, A)



A = (1).

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H ?

- G => ( )

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- B => ( )

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B

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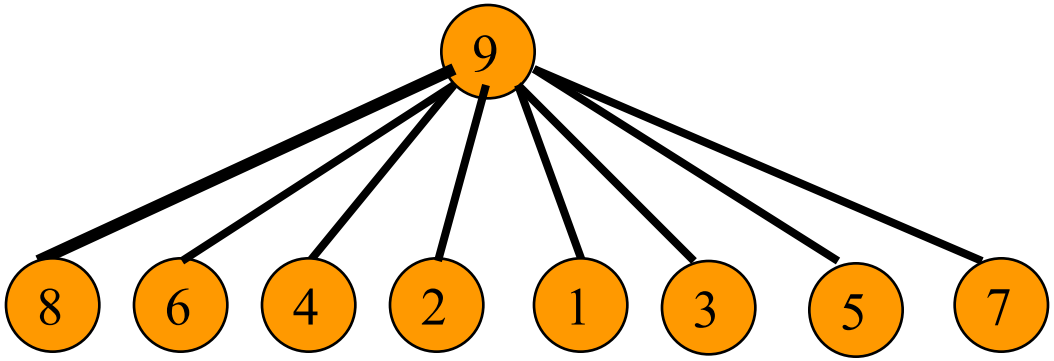
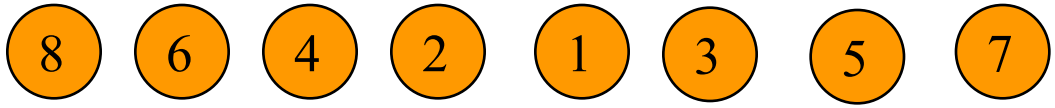
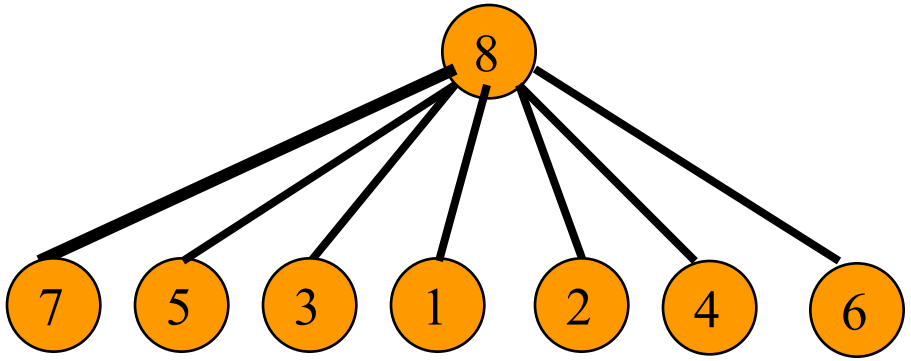






E

A 1.

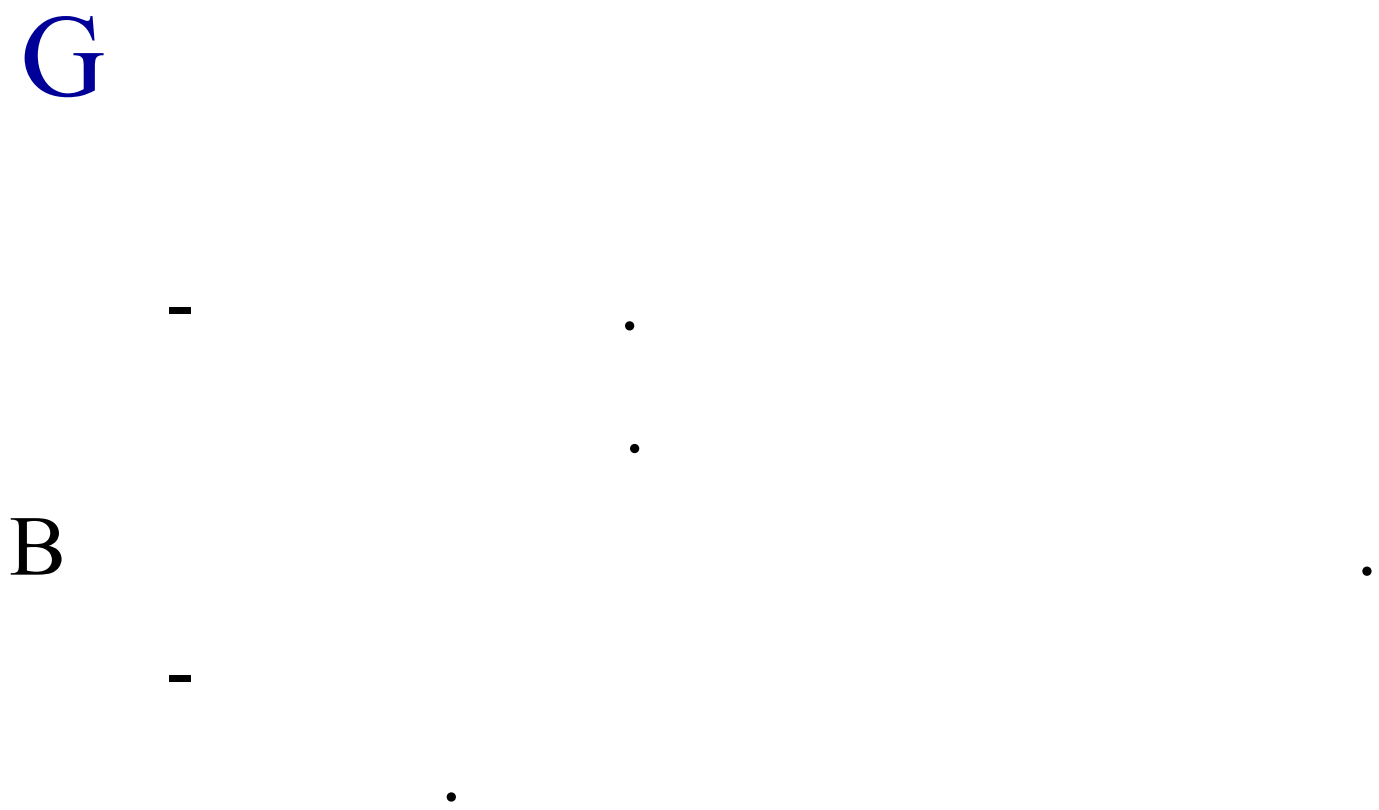
A .

/2 (9, 7, 5, 3, 1, 2, 4, 6, 8)

/2 .

- C /2.
- C 1 + 2 + + /2 1 = (^{2}).
- I (1),

( ).


G
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1.

- E .
- , .
- I # , .

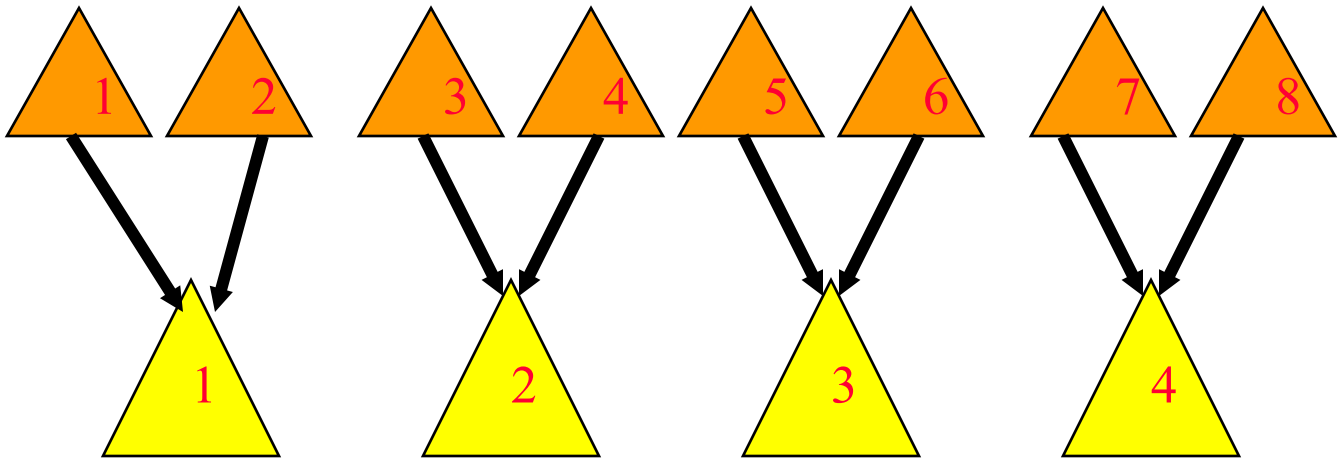
2.

- 1. C .
- , , , .

-

E

Pass 1



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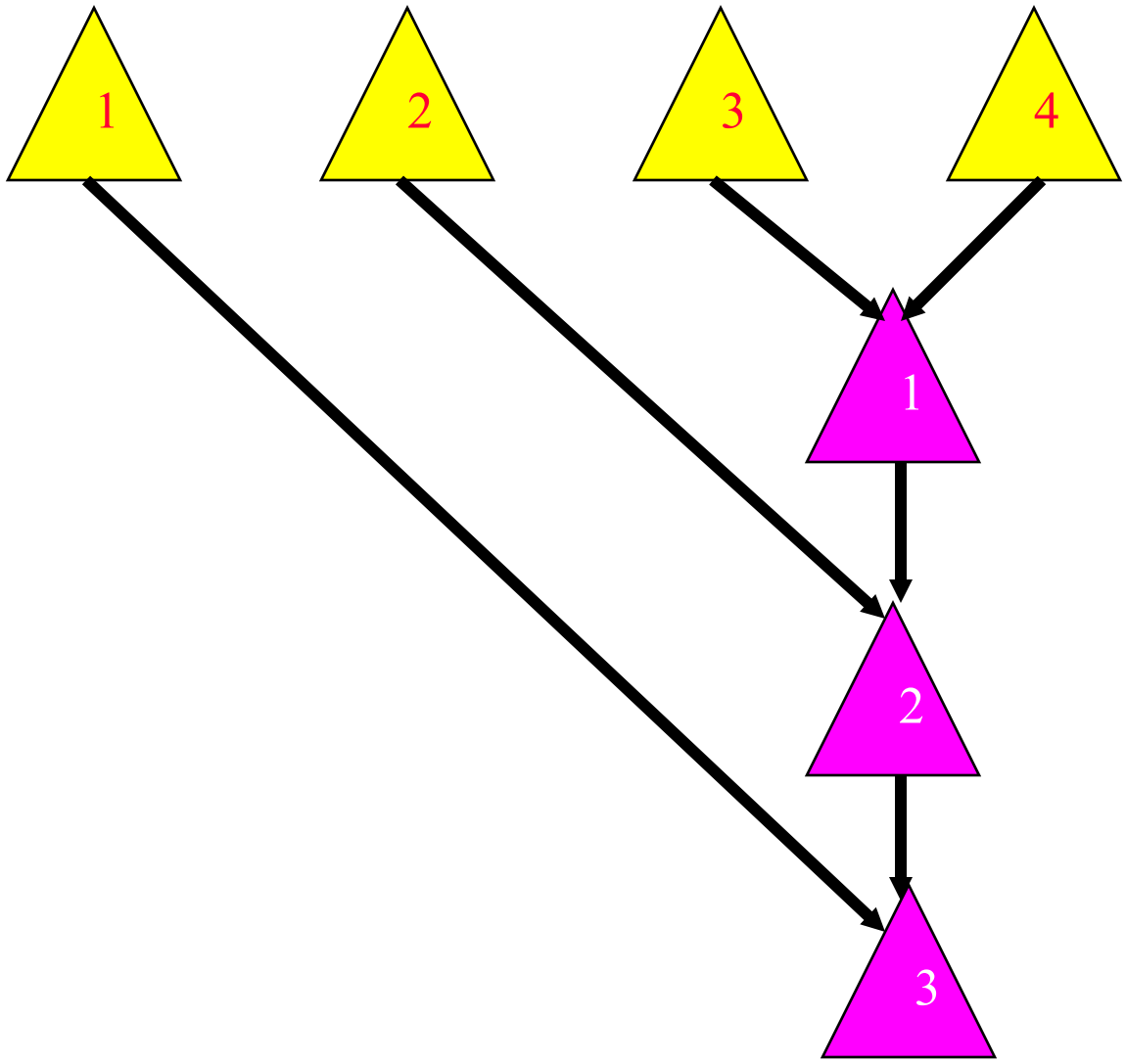
E

Pass 2



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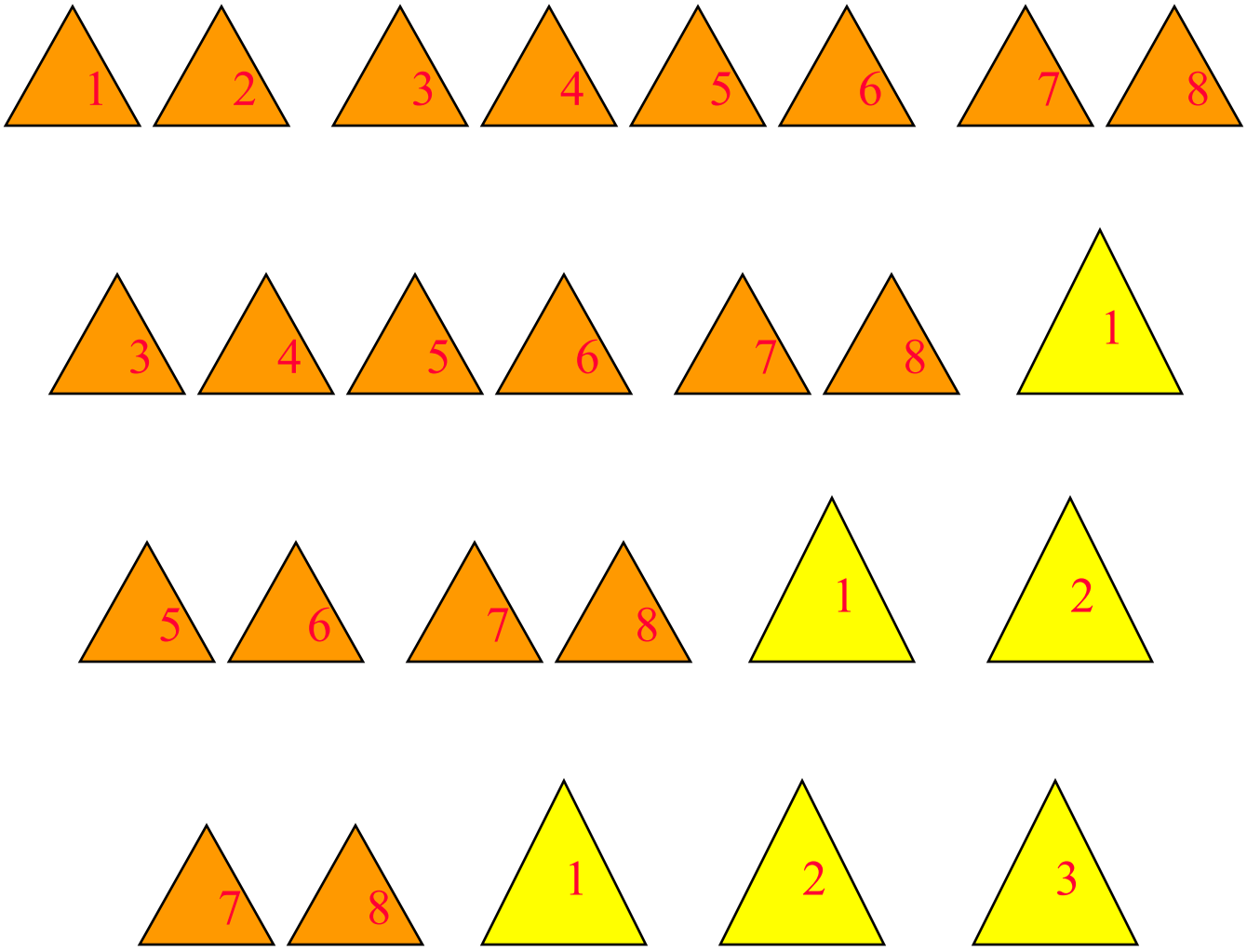

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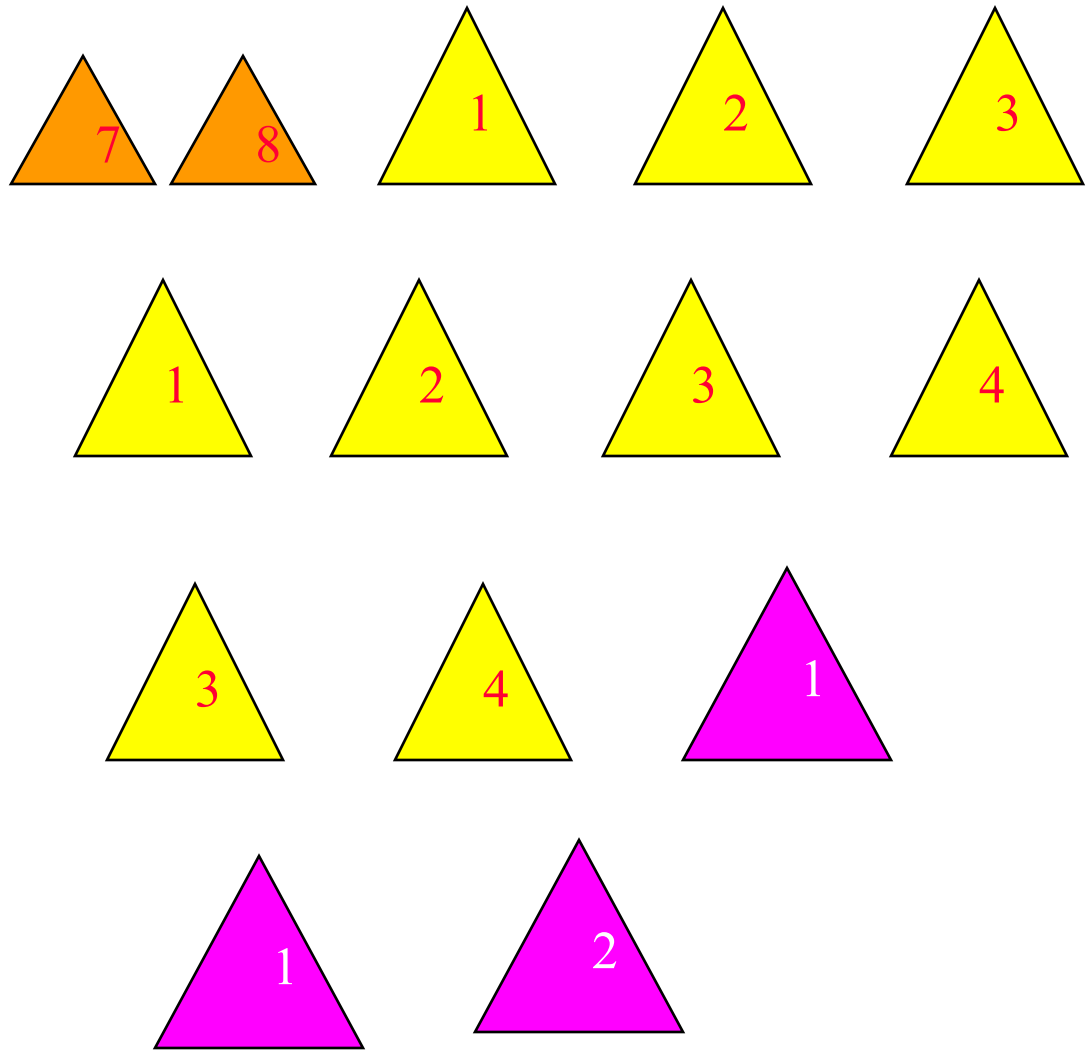

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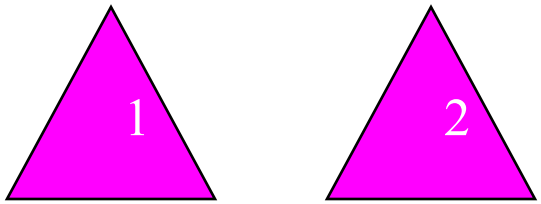
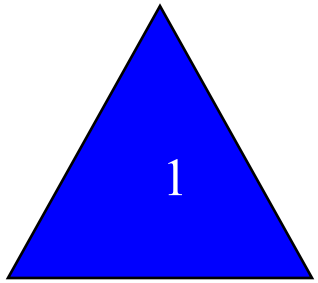
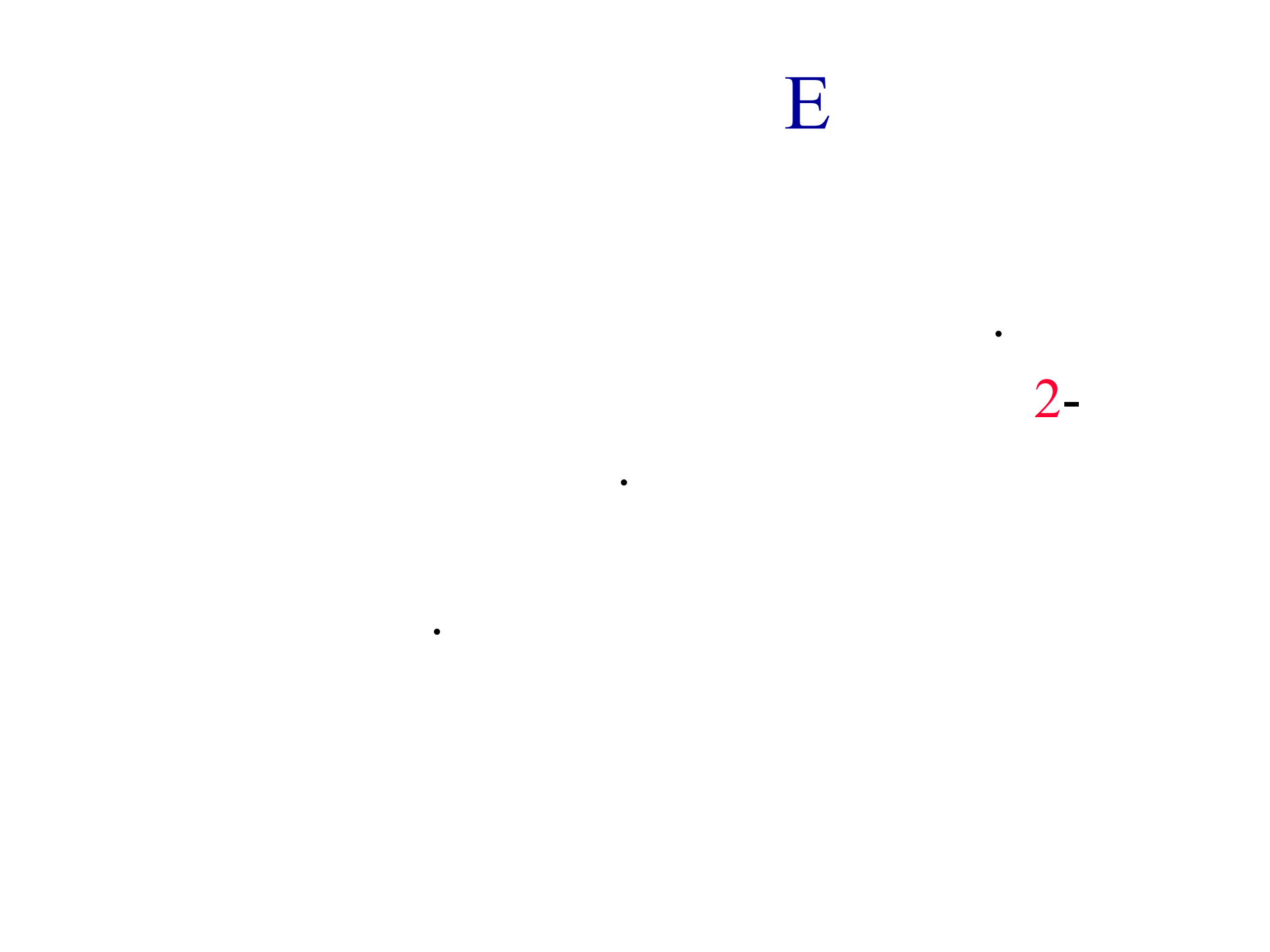




A = ( ).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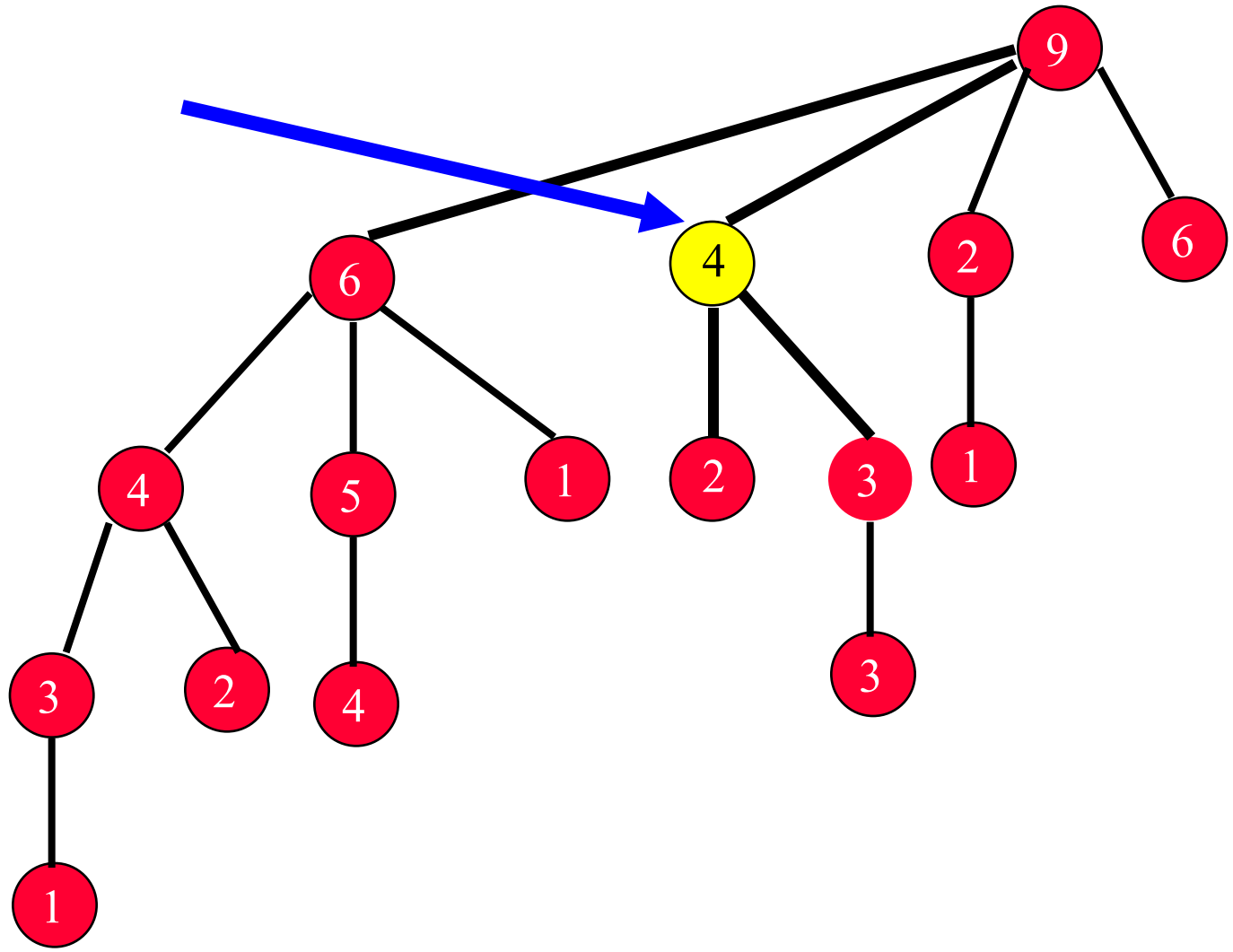
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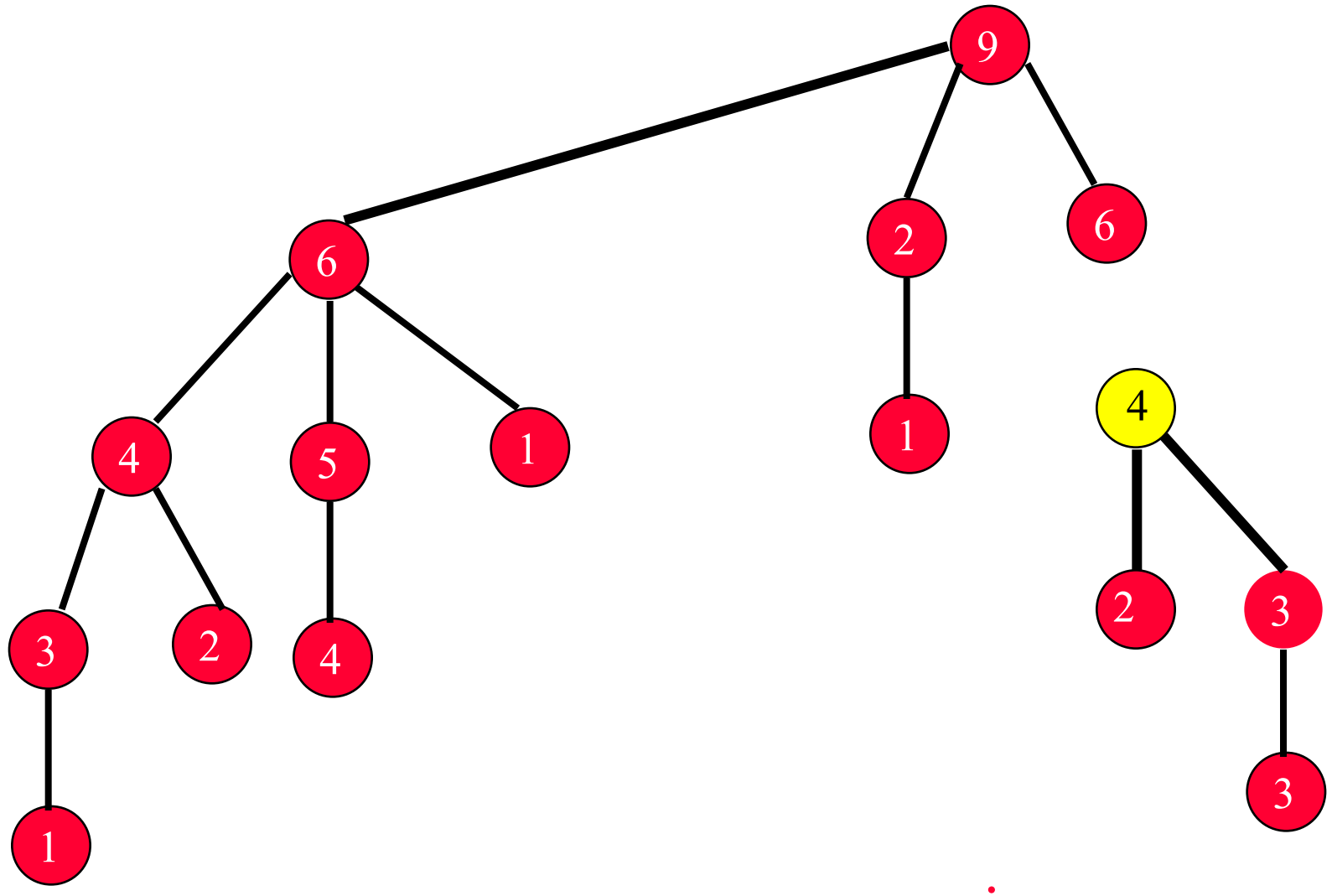
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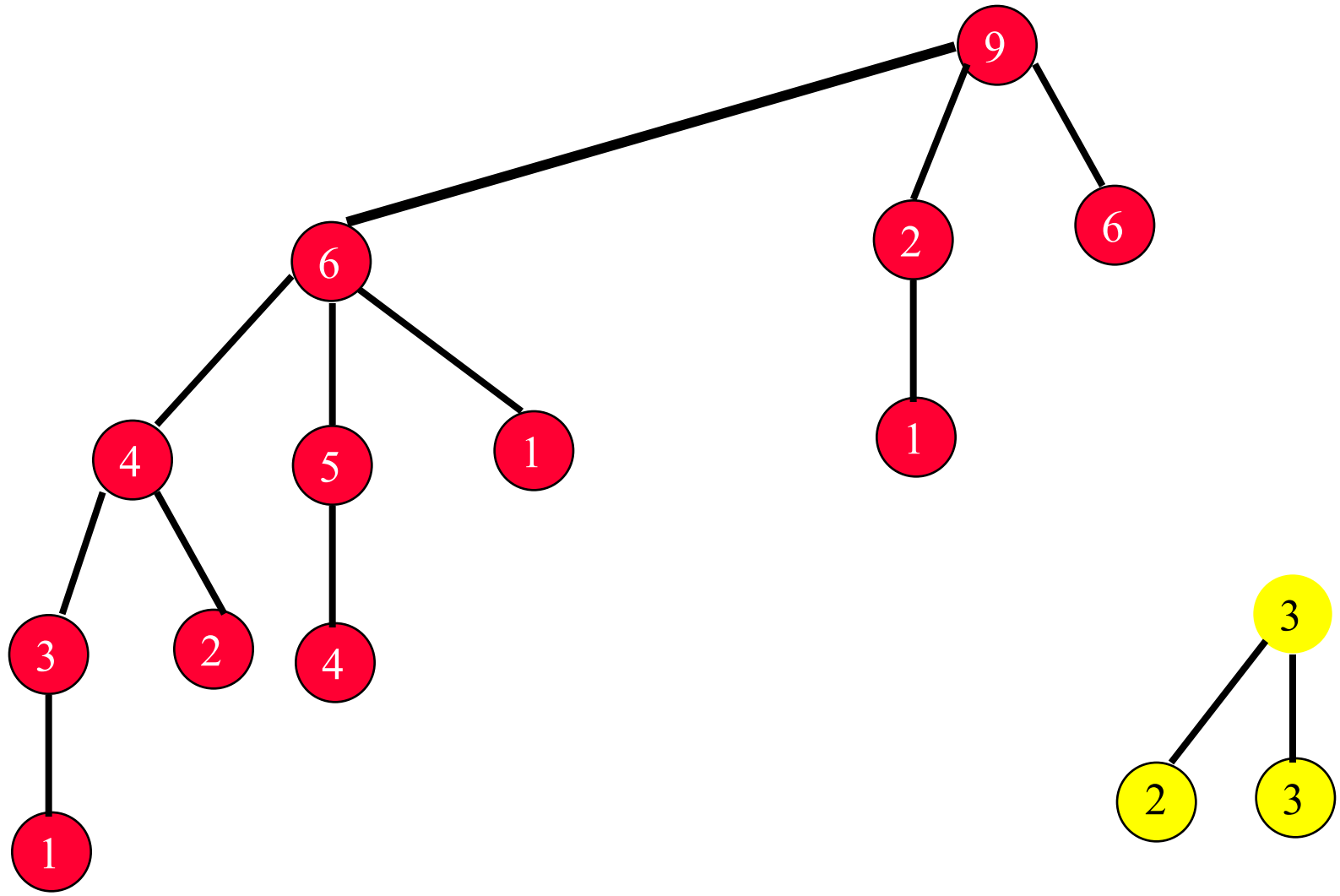
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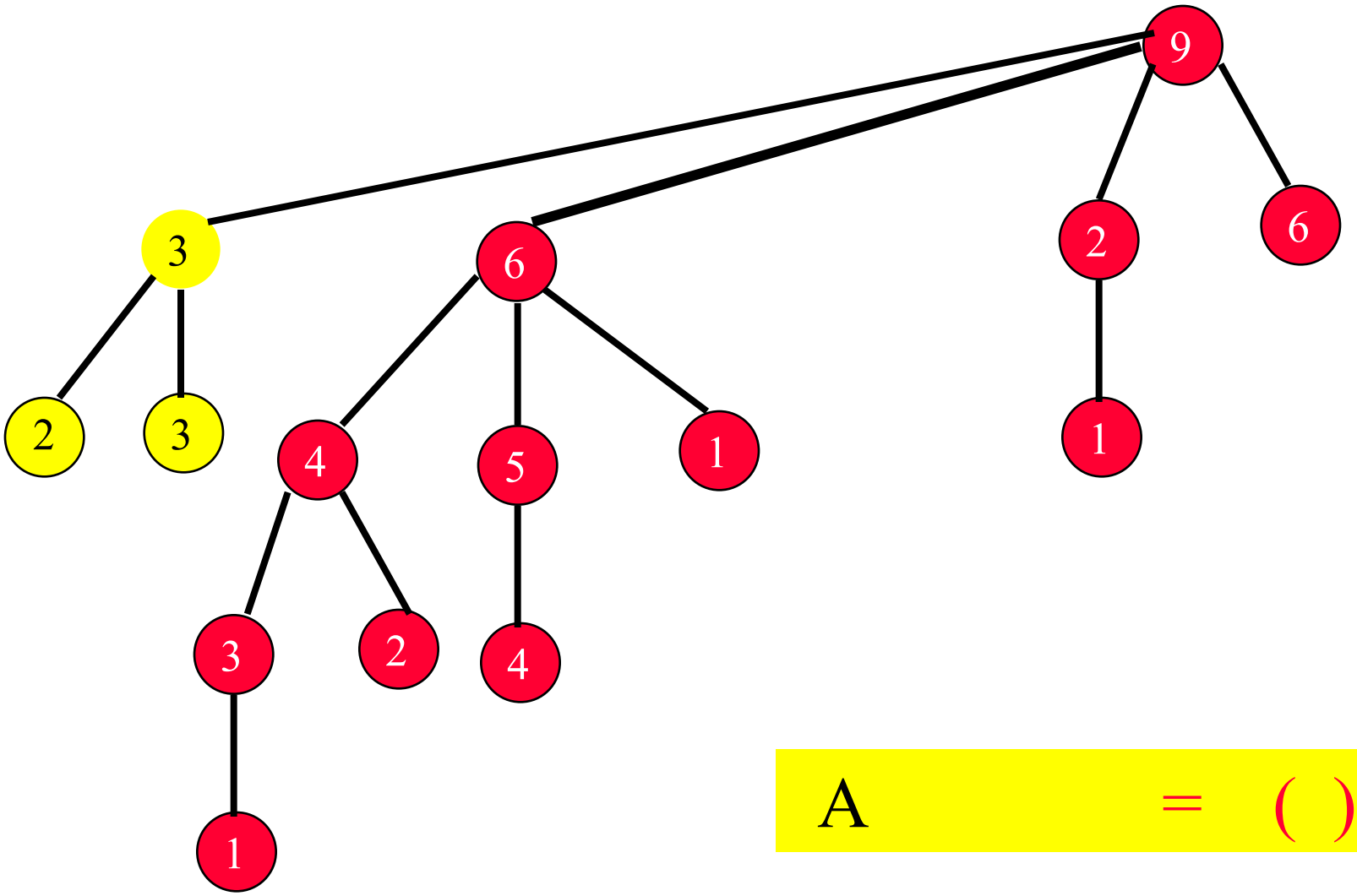

A = ( ).