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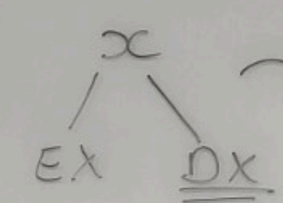
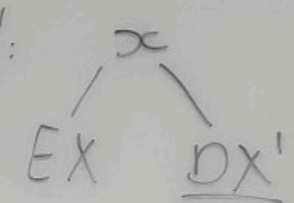
INSERÇÃO EM ÁRVORES AVL: CONTINUAÇÃO

3.2: A ÁRVORE "A" NÃO É VAZIA

A:  A': 

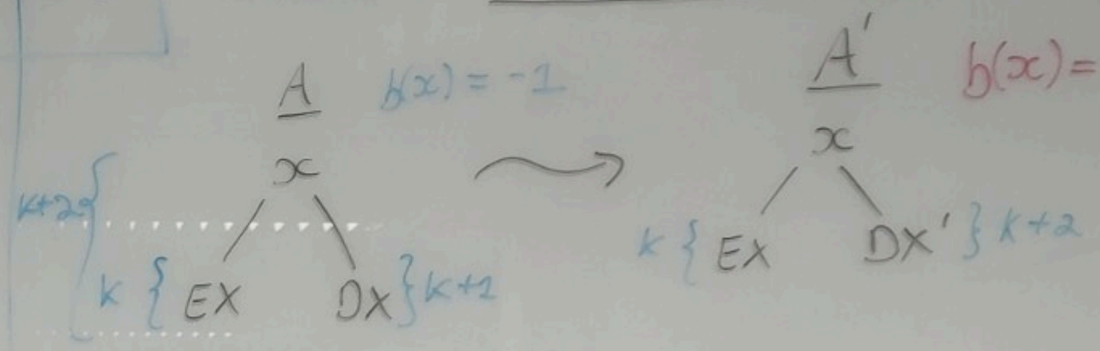
3.2.2: $h(DX') \neq h(DX)$

Logo, $h(DX') = h(DX) + 1$ (PÓS-CONDIÇÃO).

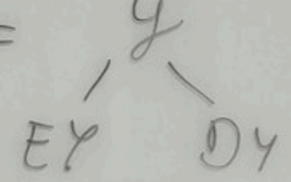
1 2

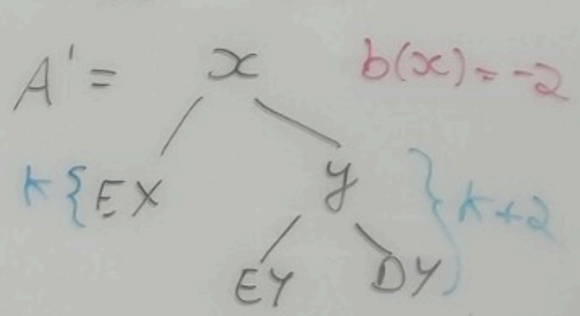
3.2.2.3: $h(EX) - h(DX) = -1$

A $b(x) = -1$ → A' $b(x) = -2$



Como $h(DX') \neq 0$, então

$DX' =$  p/ certos y, EY, DY.

Logo: $A' =$  $b(x) = -2$

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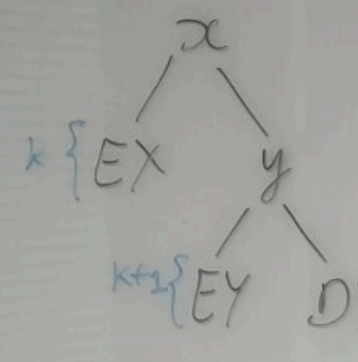
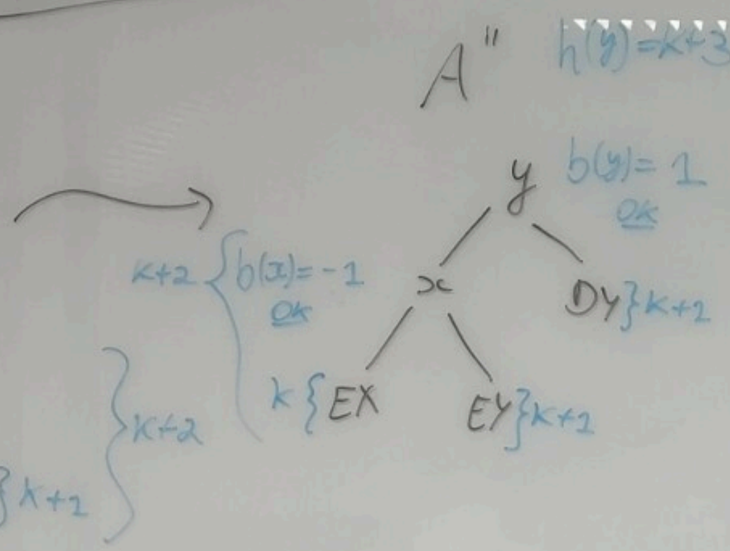
→ CASO impossível!

3.2.2.3.1: $h(EY) = h(DY)$

A'



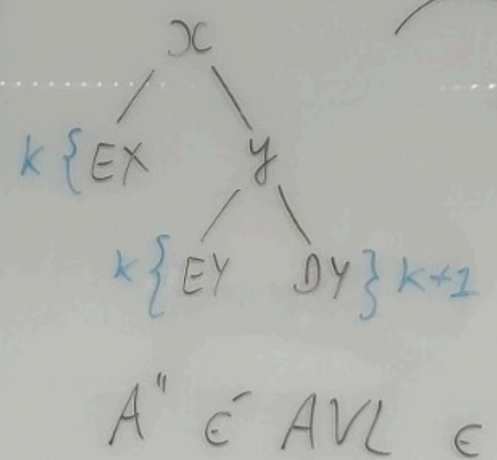
A''



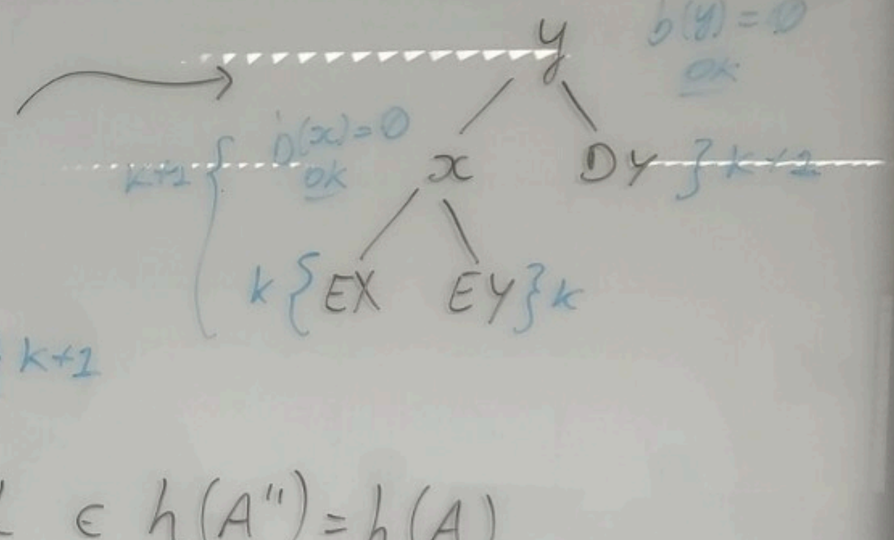
$A'' \in AVL \in h(A'') = h(A)+1.$

3.2.2.3.2: $h(EY) = h(DY) - 1$

A'



A''



$A'' \in AVL \in h(A'') = h(A).$

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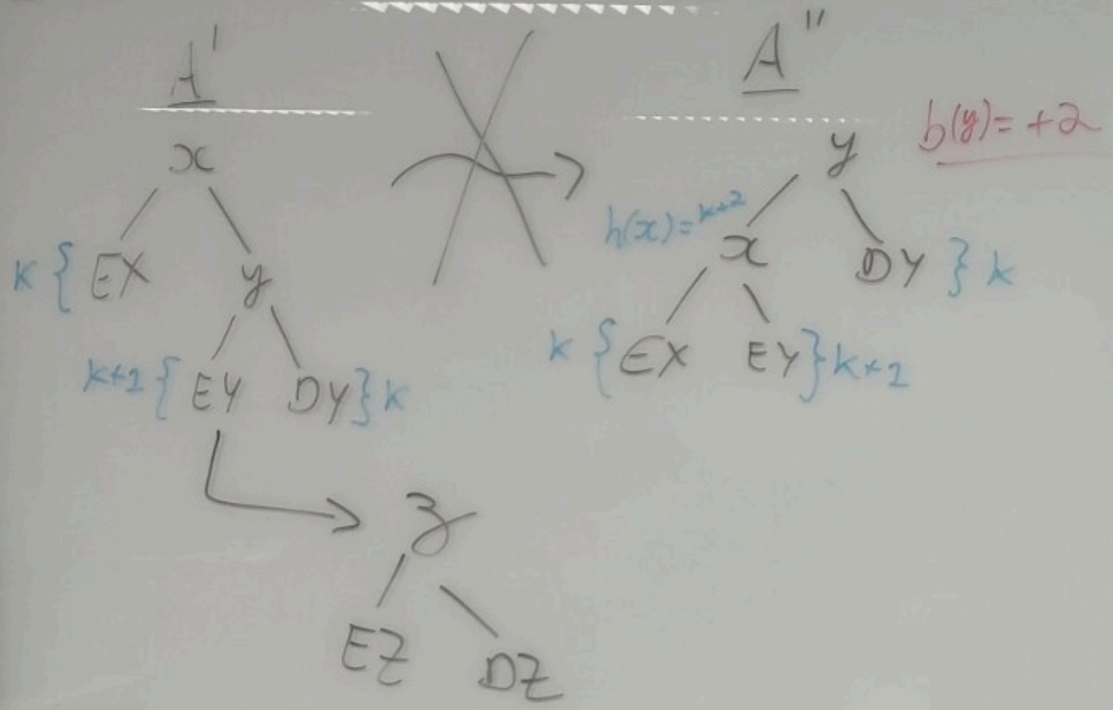
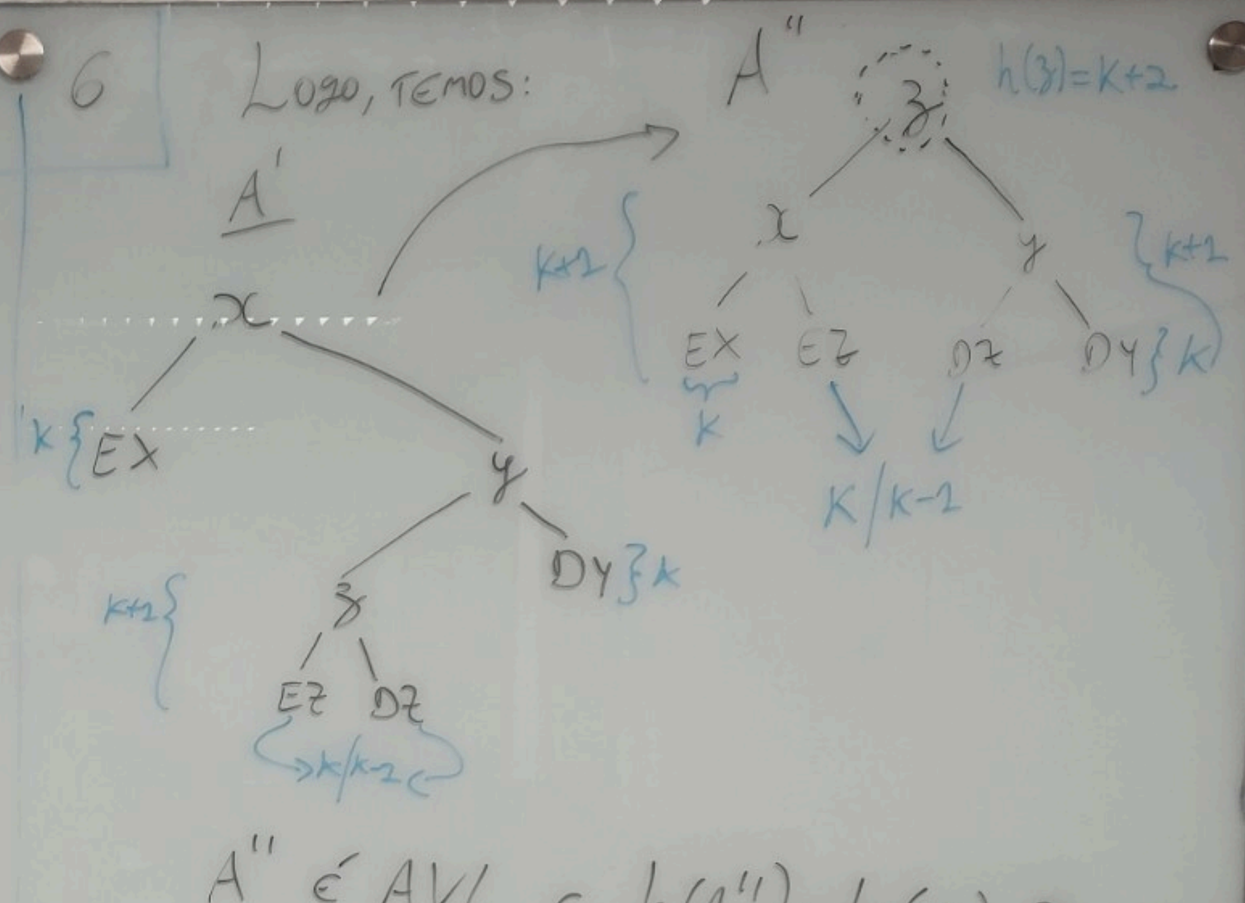
3.2.2.3.3: $h(EY) = h(DY) + 1$



Logo, temos:



A'' é AVL e $h(A'') = h(A)$.

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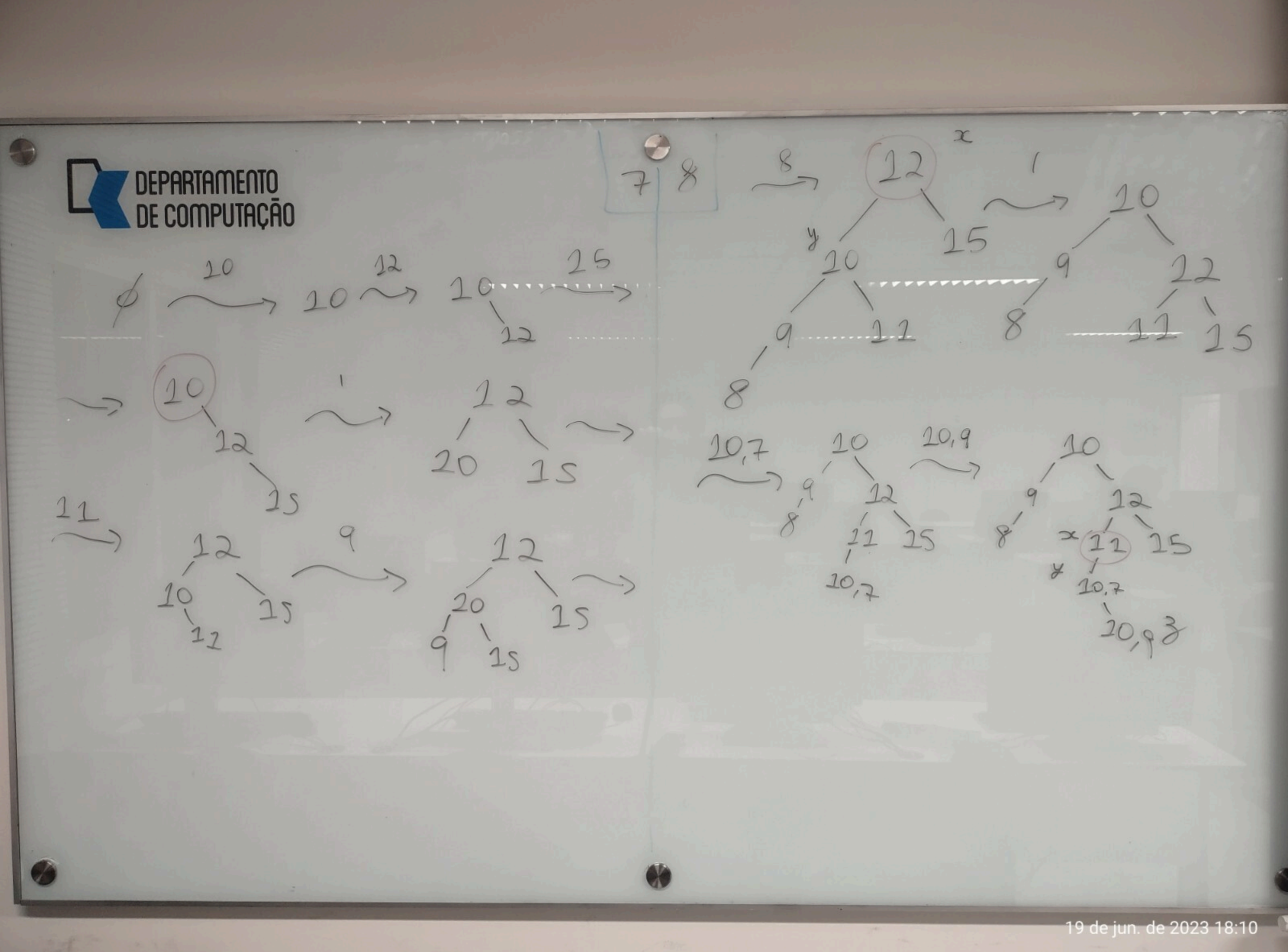

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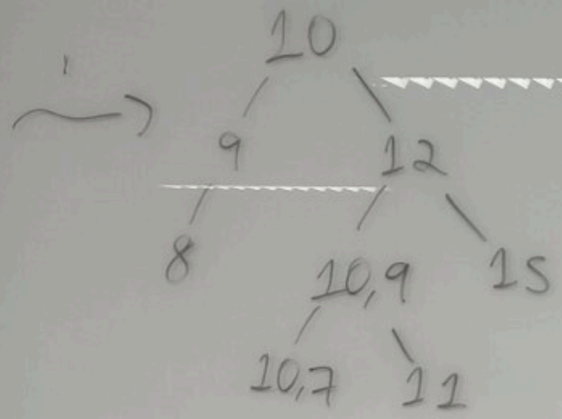

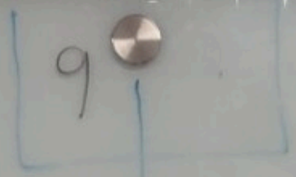

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