COP3502 10/31/25

1) Class Vote

23 - Keep Same

9 - Quiz in Class validate HMR (Program Grades)

↳ Don't use hmk for students' grade calculations

0 - drop all Hmk from grade for all

0 - let everyone use AI remainder assgn.

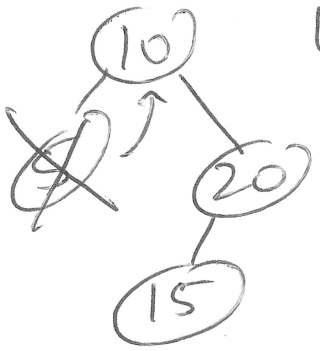
3 - ~~Question~~ not sure → live coding.

11 - Reweight assignments

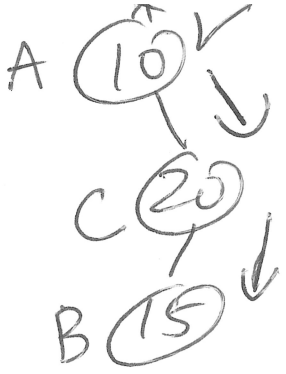
AVL Tree Delete

1) Same as regular BST delete BUT this may cause an imbalance!

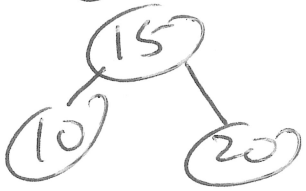
2) Trace up the ancestral path, fixing imbalances as necessary. There may be more than 1 fix necessary!

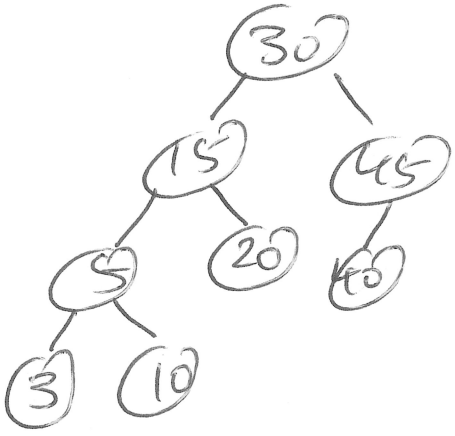


Delete 5

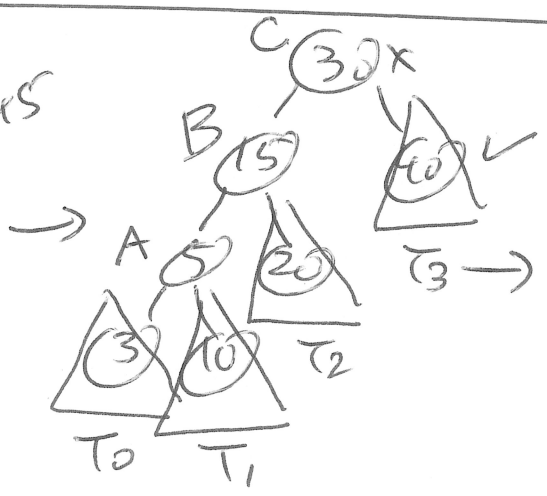


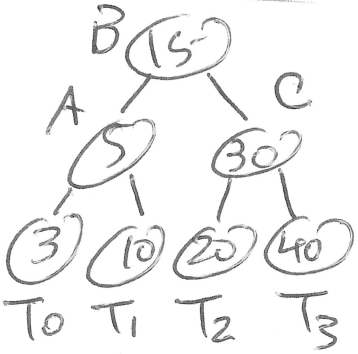
How to ID A, B, C?
mark imbalanced node, then go to side w/ mark H twice

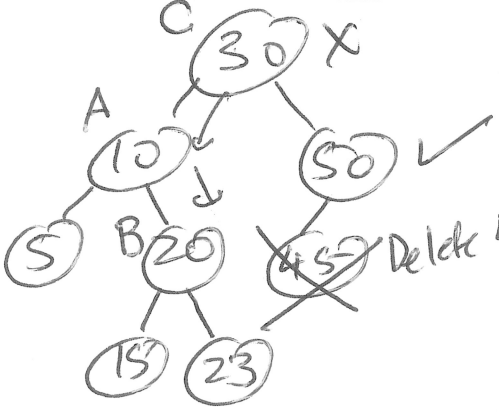


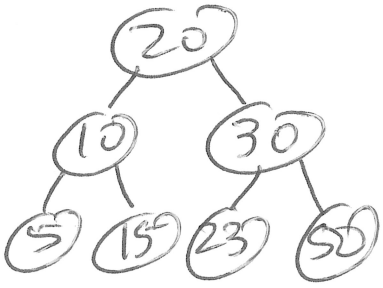


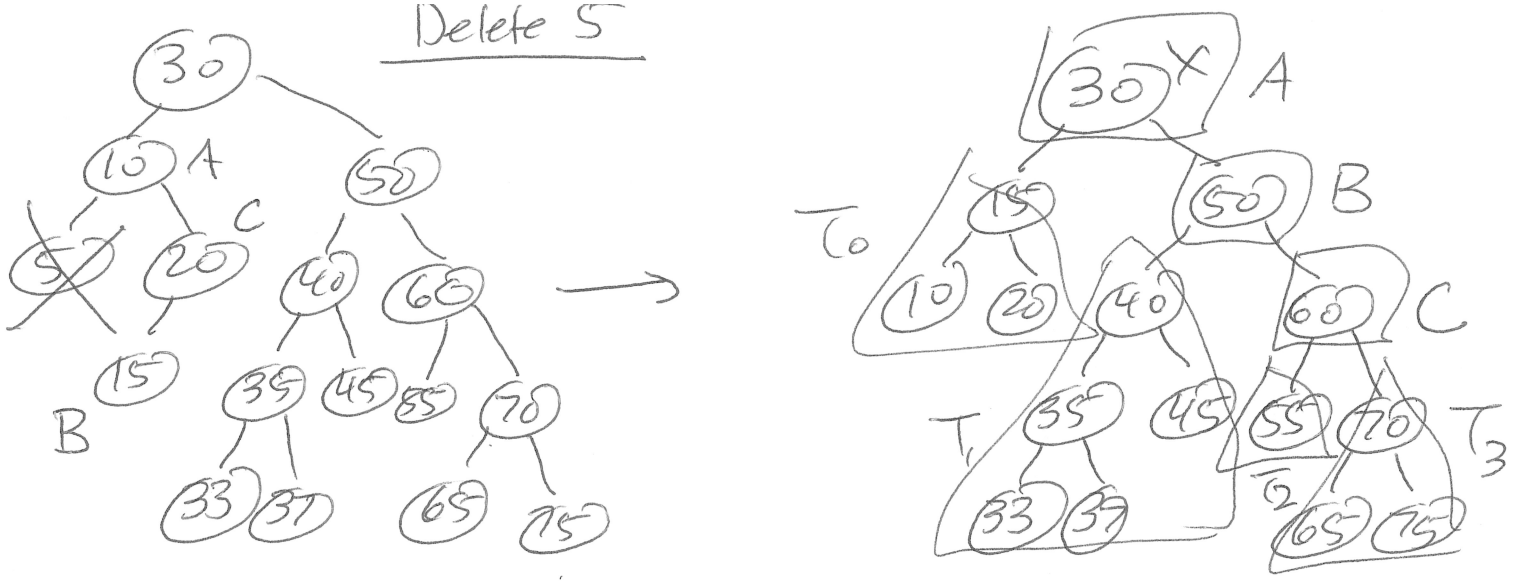
Delete 45











Here is where I made the error in class. When choosing nodes for the set $\{A, B, C\}$, you always choose the node that is down the "taller" side. So, (30) and (50) are part ~~to~~ of $\{A, B, C\}$. Now to decide the last element, if both sides of (50) are the same height, you <u>HAVE</u> to go in the same direction you previously went. Thus, since 50 is right of 30, we <u>MUST</u> choose 60 (right of 50) to complete the set $\{A, B, C\}$. So there is <u>No</u> choice in this algorithm at all. Here is the final tree: