

Kristopher Windsor 9/10

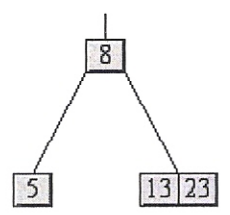
B-tree homework for CS146

For each problem, draw the new tree resulting from the given tree by inserting (in the first few problems) or deleting (in the later problems) the specified key.

1. Insert 11:

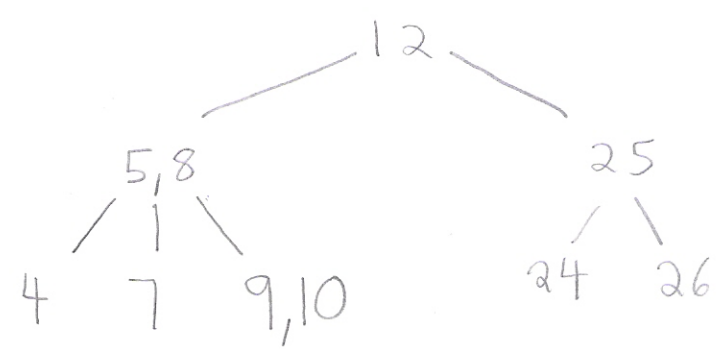
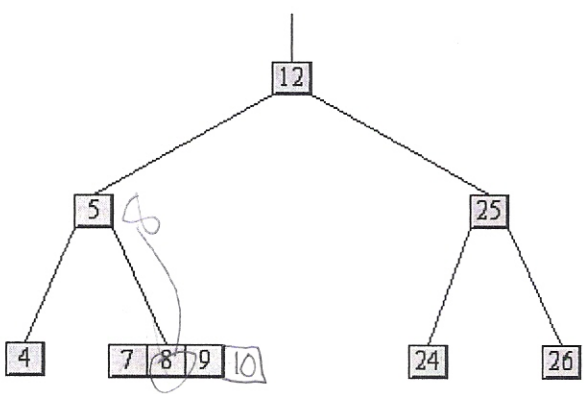
$t=2$ (that's the minimum t value)

$$t-1 \leq \text{Keys} \leq 2t-1$$



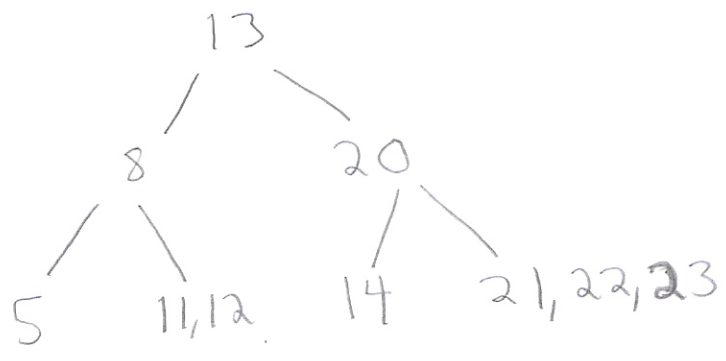
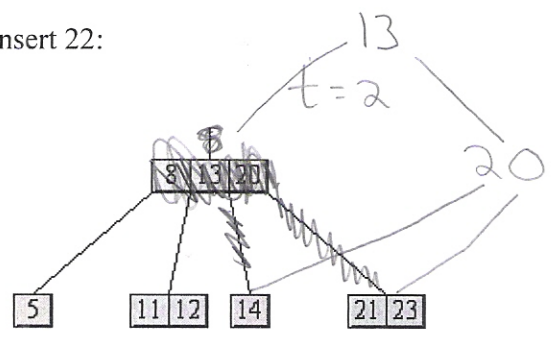
2. Insert 10:

$t=2$



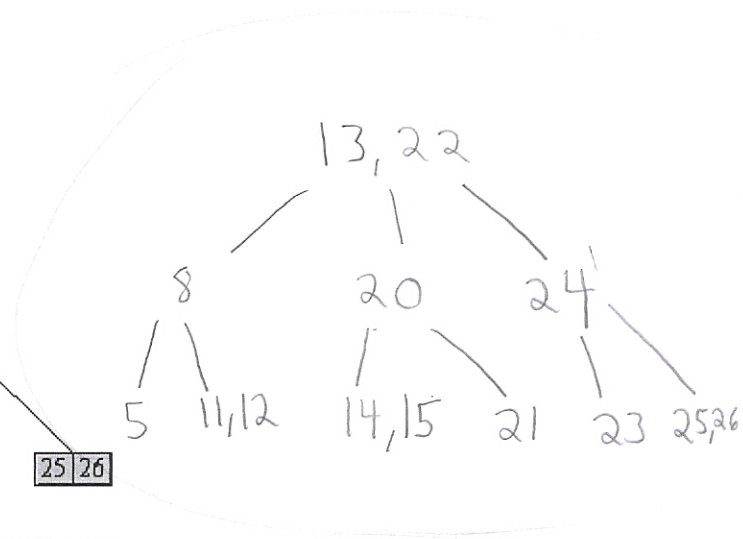
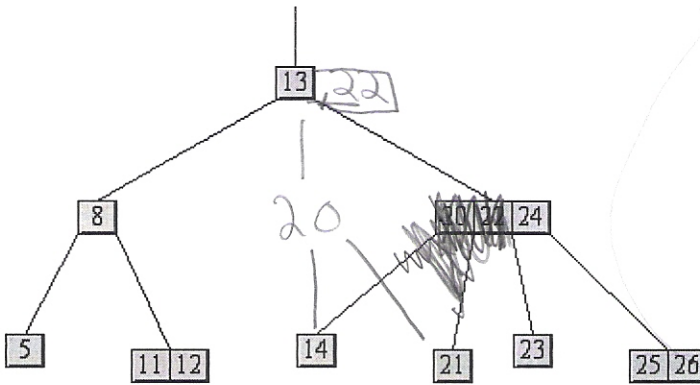
3. Insert 22:

$t=2$

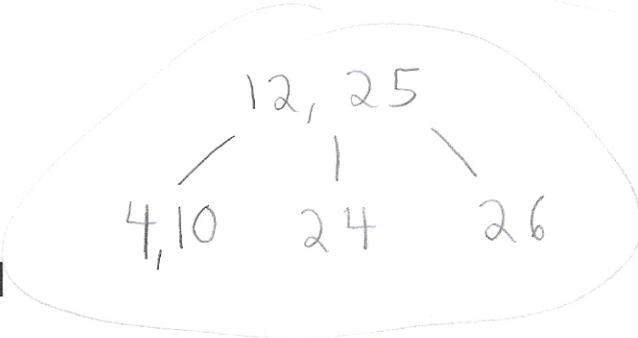
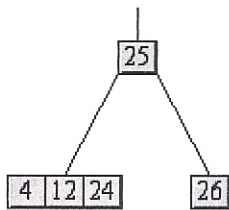


I've made the astute observation that $t=2$ for this whole homework

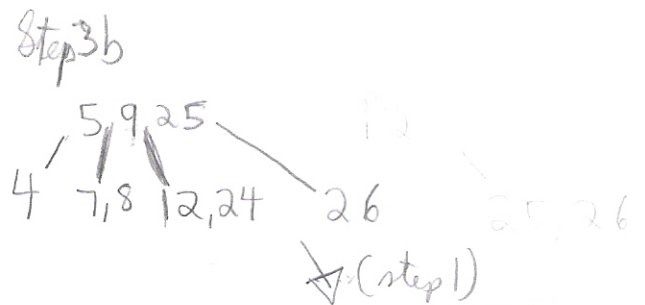
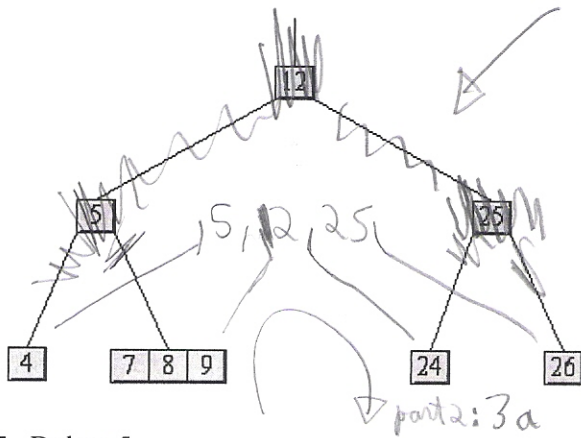
4. Insert 15



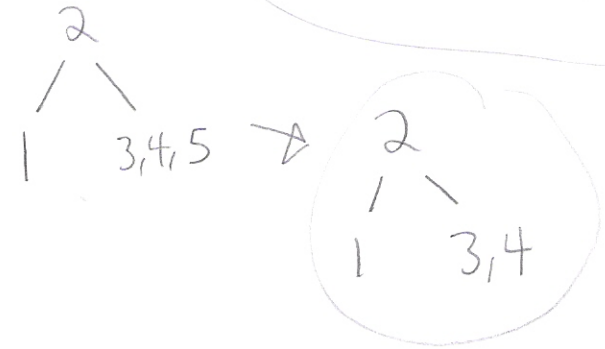
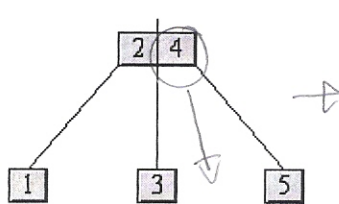
5. Insert 10



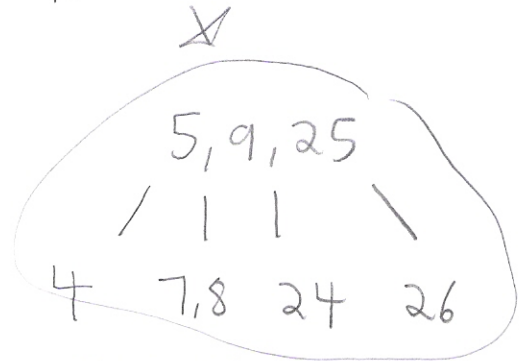
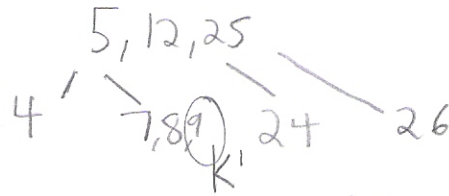
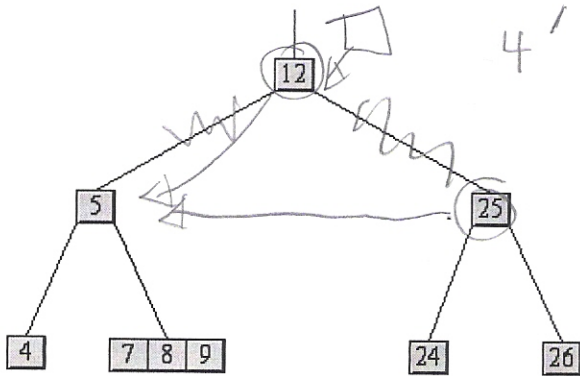
6. Delete 24



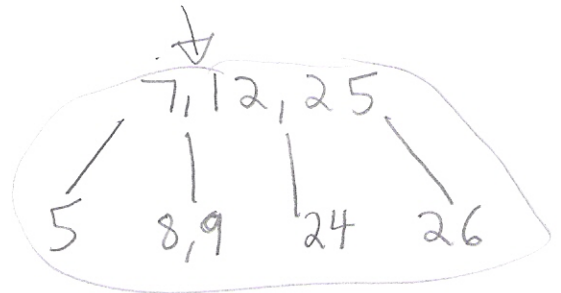
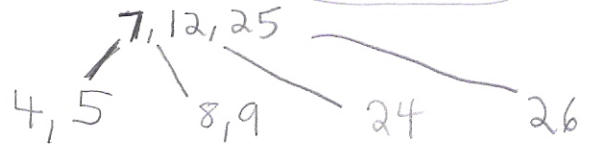
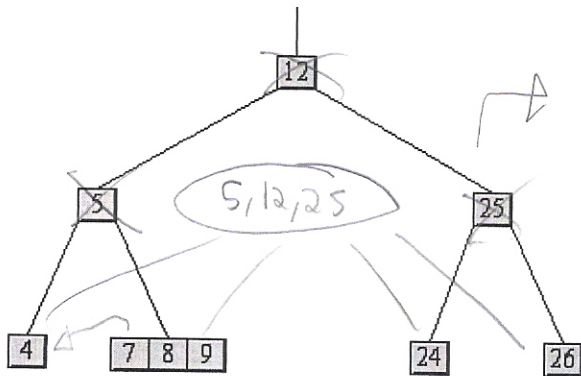
7. Delete 5



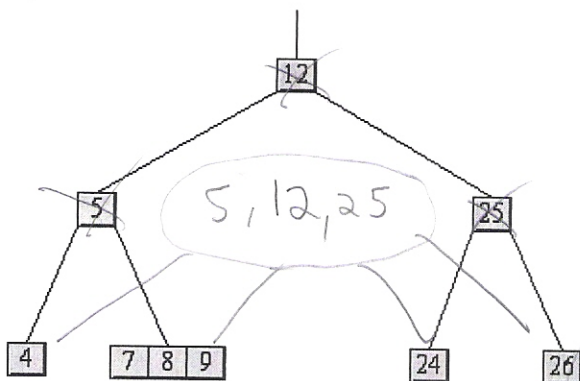
8. Delete 12



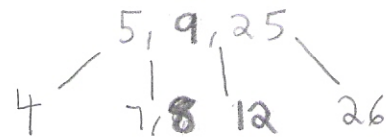
9. Delete 4



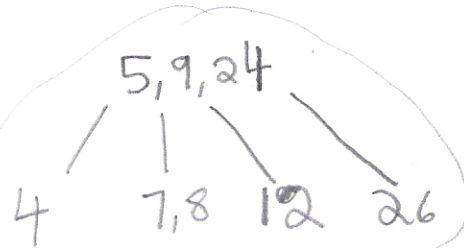
10. Delete 25



deleted 24:



then put 24 in place of 25:



K = Key
 X = node w/ K
 y, z = children of x

