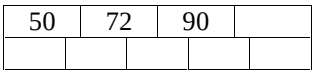
This week's tutorial has you manipulating B-trees.

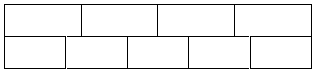
Example 1: B-tree of order 5

We start the exercise with a B-tree of order M = 5. Every node (except the parent) in a B-tree of order 5 must have at least 2 values ((M-1)/2) and at most 4 values (M-1).

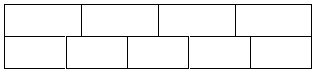
At the beginning, the B-tree has three values: 50, 72 and 90 all in the root.

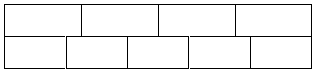


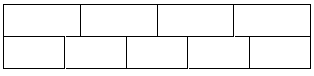
1. Add the value 60 to the B-tree:

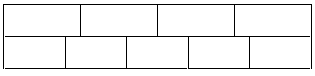


2. Add the value 55 to the B-tree:

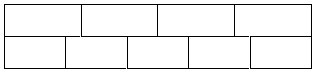


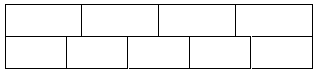


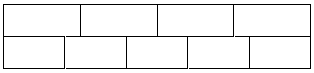




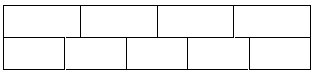
3. Add 63 to the B-tree:

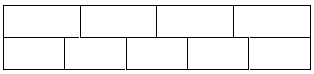


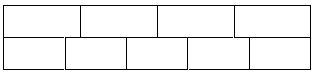




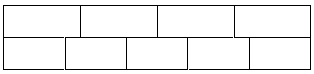
4. Add 80:

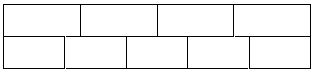


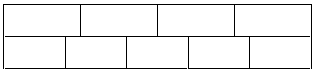


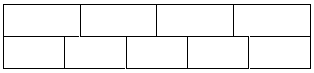


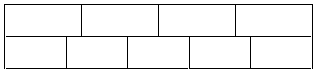
5. Add 85:

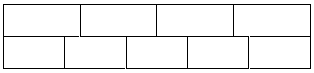


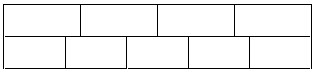




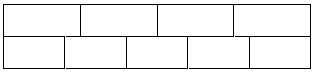


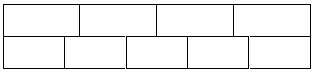


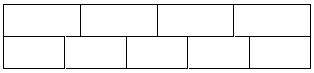


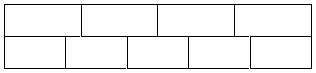


6. Add 66:

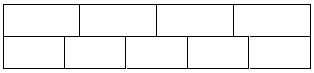


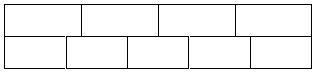


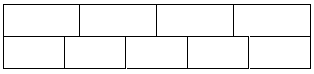


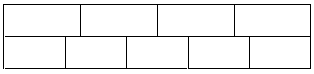


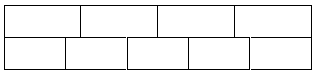
7. Delete 90:

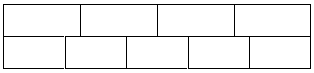


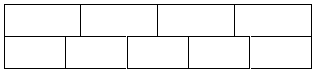


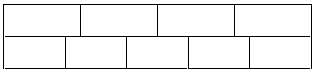




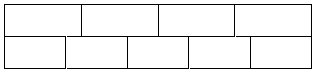


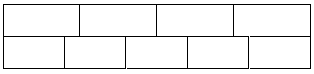


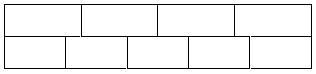


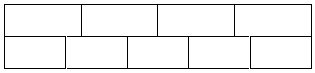


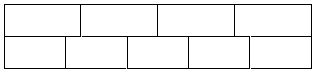
8. Delete 60:

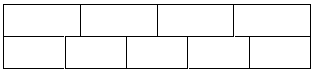






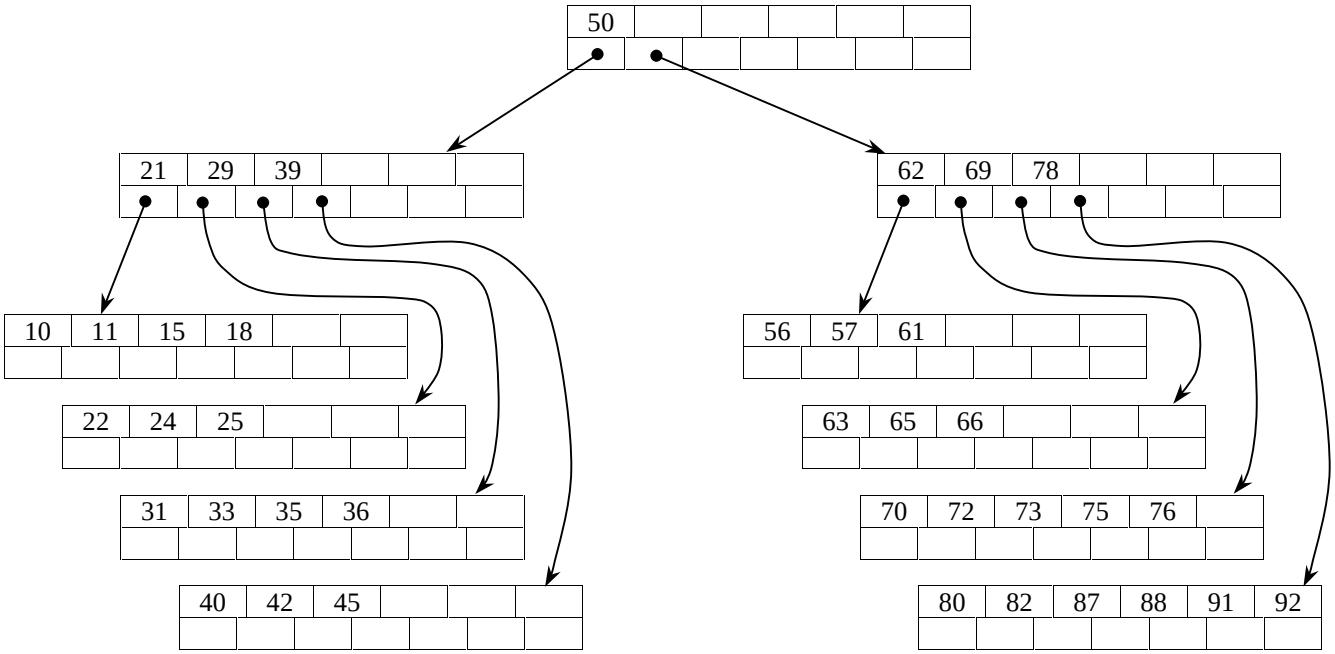




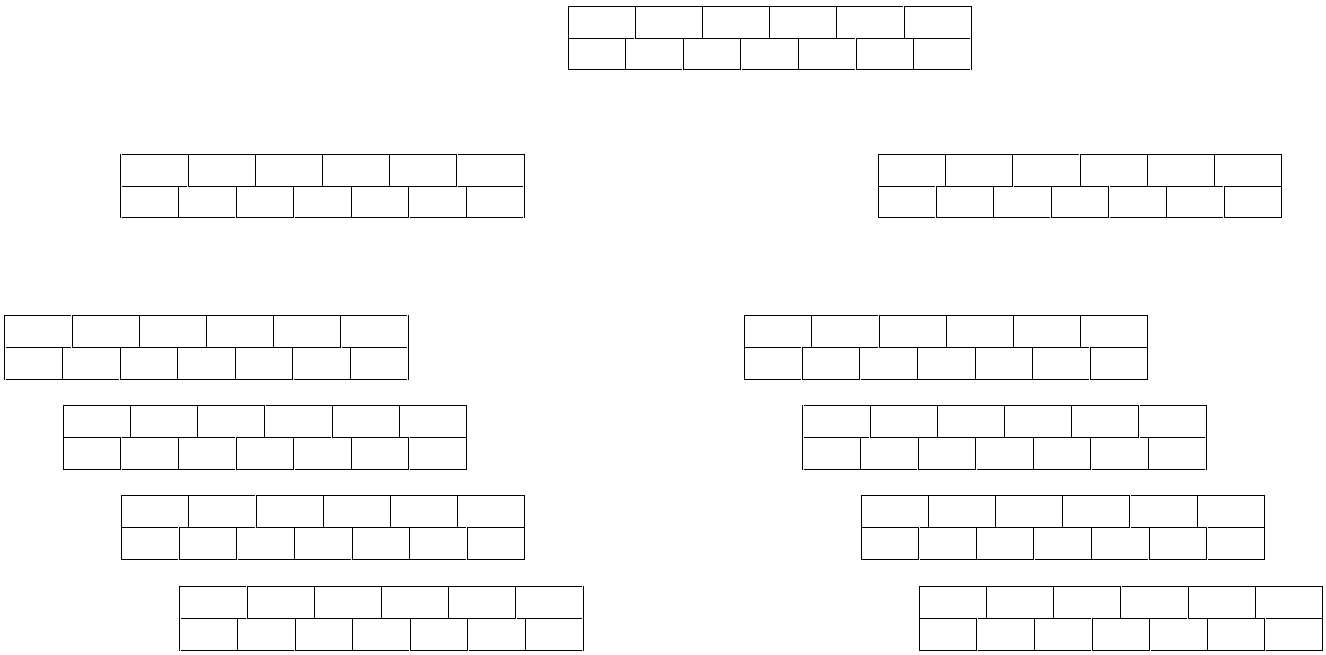


Example 2: B-tree of order 7

Let's have a look at a slightly bigger example: a B-tree of order 7 with lots of nodes already in the tree.

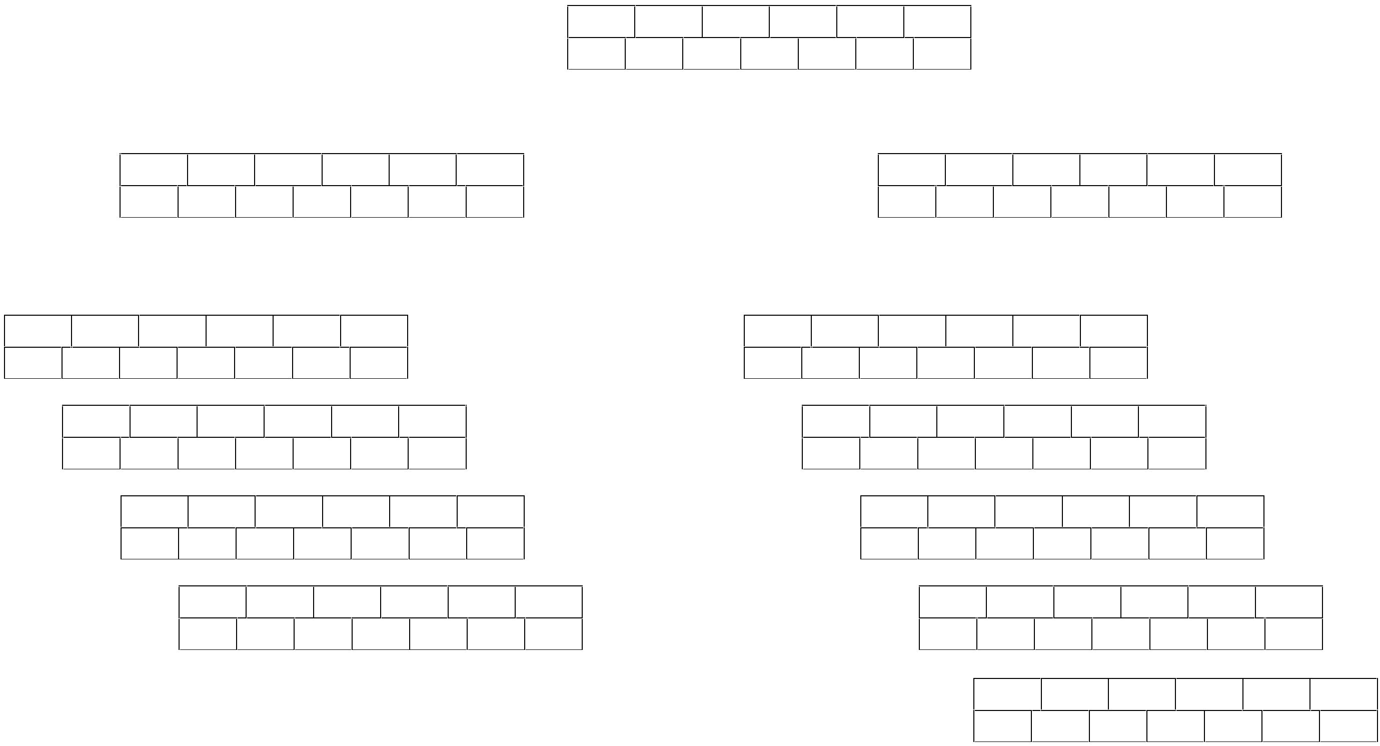


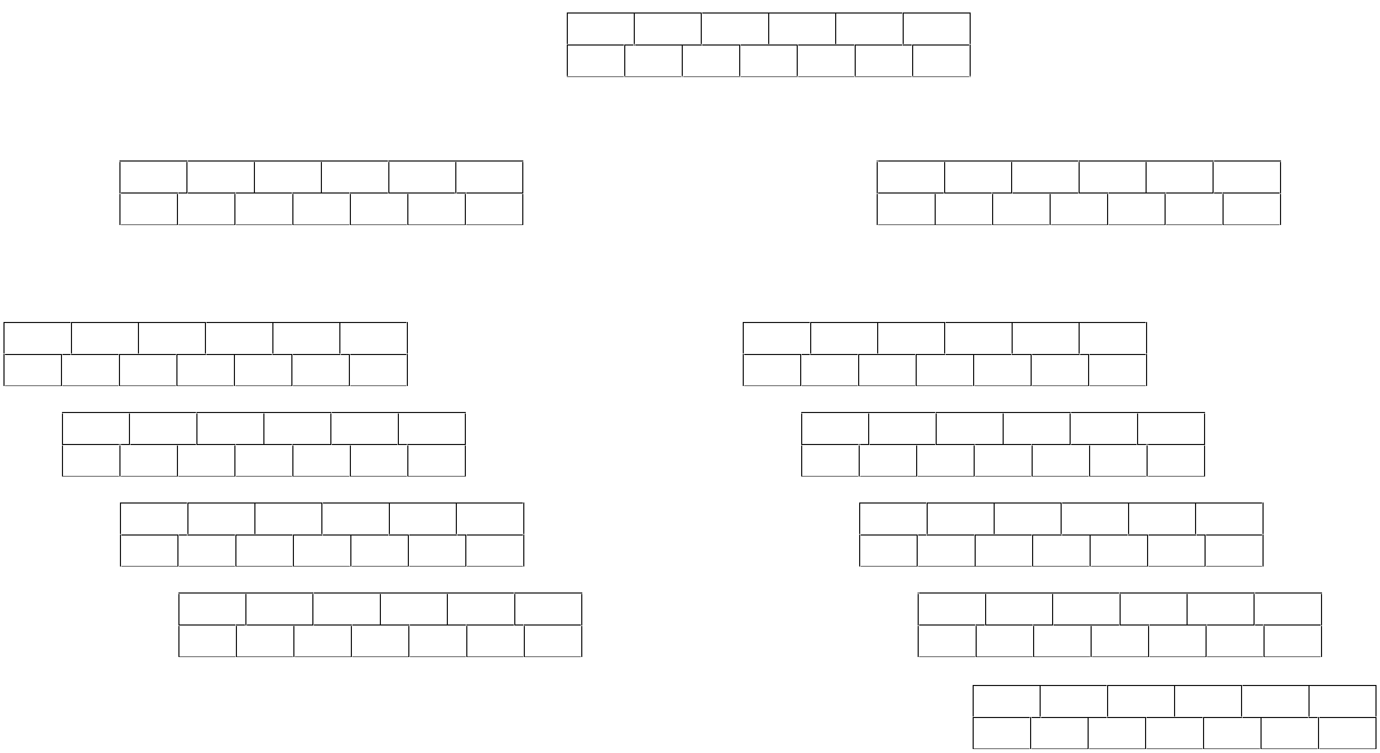
9. Add the key with value 77:



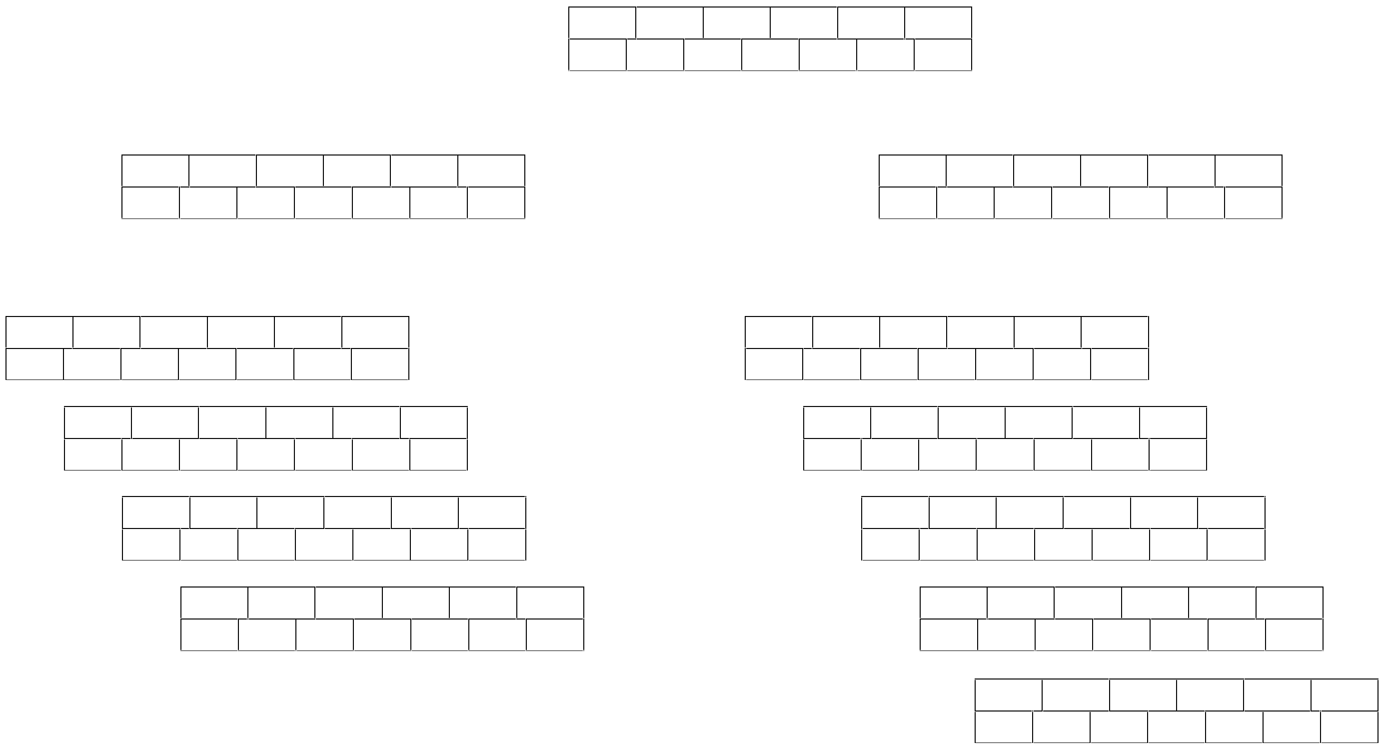
10. Add 81:

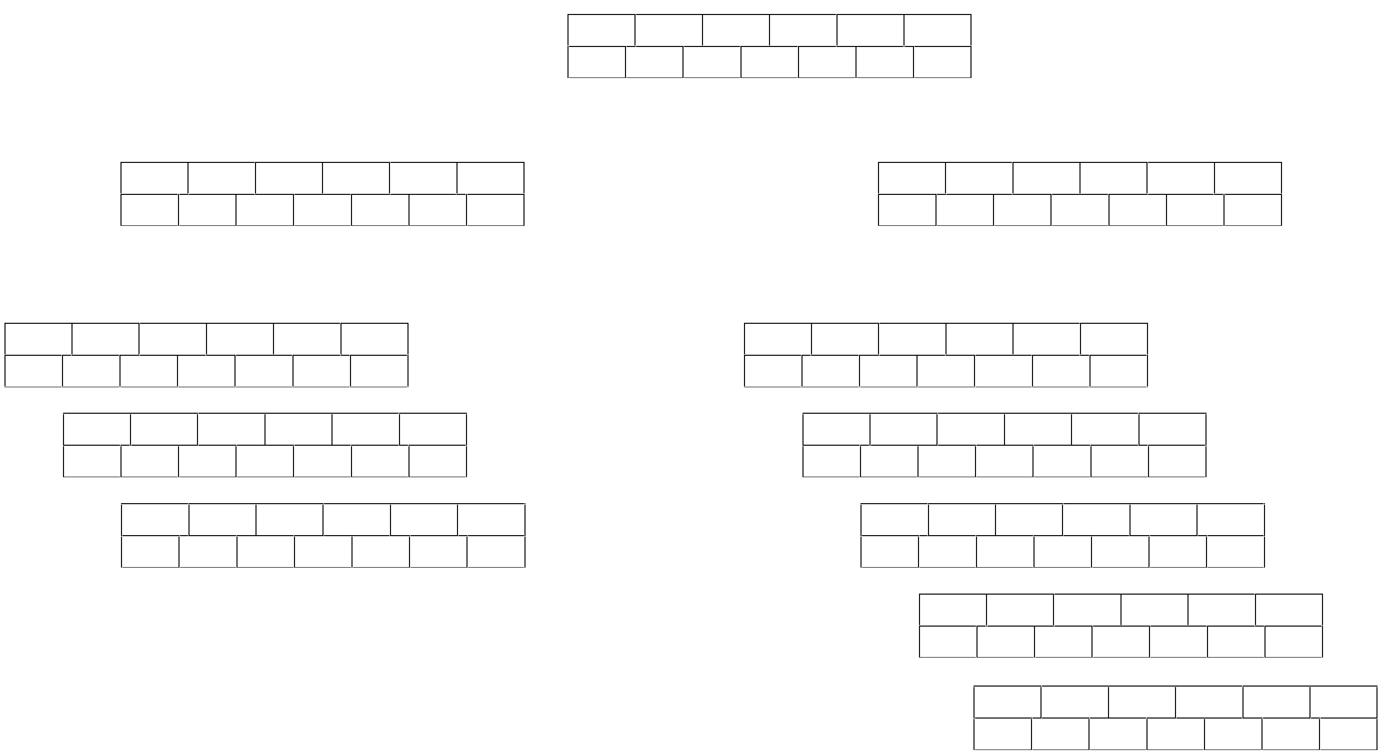
11. Delete 50:

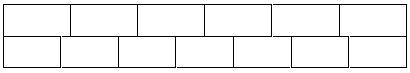


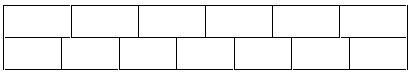


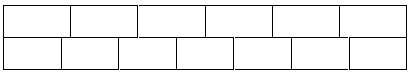
12. Delete 36:

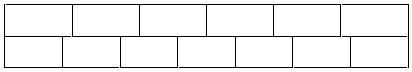


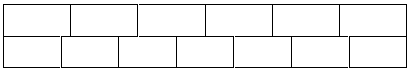


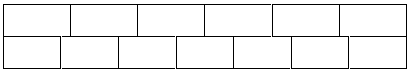


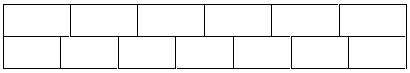


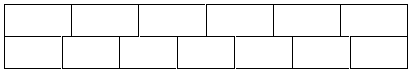


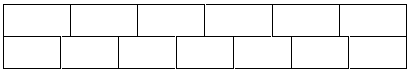


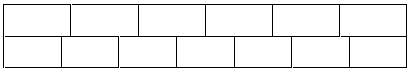


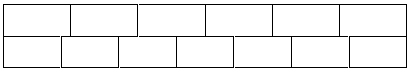












13. Finally, delete 61: