



*Answers 2 (BST  $\rightarrow$  AVL – 4,5 points)*

**Specifications:**

The function `makeAVL( $B$ )` builds a copy of the binary tree  $B$  with the balance factors specified in each node.

[illegible]



**Answers 4 (AVL – 3 points)**

Tree built by insertions of 13, 20, 5, 1, 15, 10, 18:

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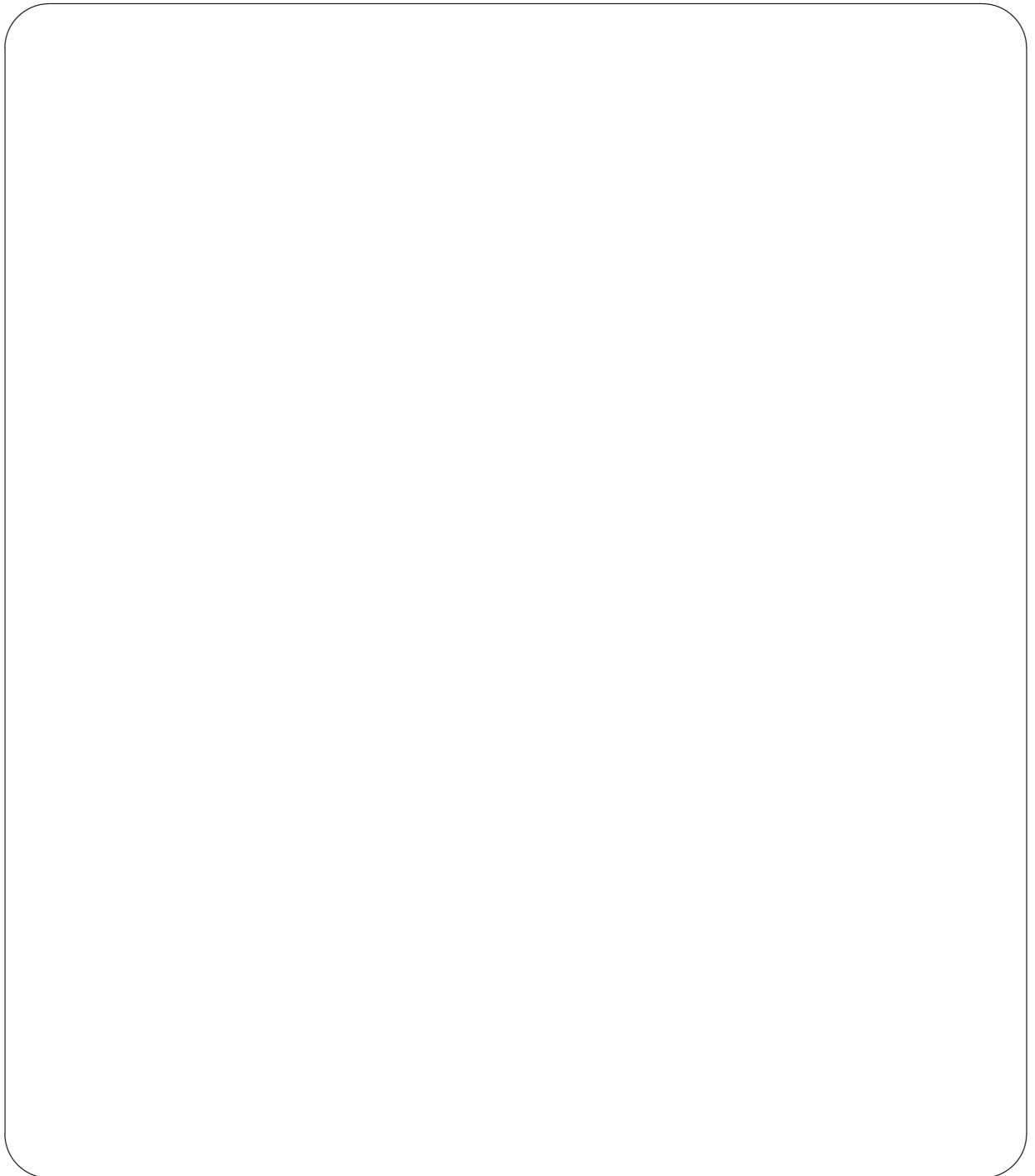
Tree after insertions of 25, 4 and 21:

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Tree after insertions of 7, 12 and 23:

**Answers 5 (2.4-tree → Red-black Tree – 2 points)**

1. *Red-black tree associated with the 2-4 tree of the subject:*



2. *Is this an AVL?* YES - NO

*Justification:*

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**Answers 6 (Trees and mystery – 4 points)**

1. Tree built by `makeTree(13)`:

2. Properties of the tree built by `makeTree(n)` ( $n > 0$ ):

(a) \_\_\_\_\_

(b) \_\_\_\_\_

