

## Quiz 7 (Nov 1)

By taking this quiz, you agree to adhere to the honor code of the class.

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Name:

netid:

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Write your name and netid on **both** sides of the paper. Write your solution **first on this side**. If space is not enough, write to the other side. You can ask for extra paper if necessary.

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Name:

netid:

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(8 points) Add the following numbers to a binary search tree. Redraw the tree after each addition. 11, 33, 21, 54, 12, 75, 35, 87, 123, 43, 14, 9, 42.

(2 points) Say we have a binary search tree with  $n$  elements and  $h$  height. What is the worst case asymptotic computational complexity of `get(key)`? Explain your answer. Hint: look at the trees you've drawn!

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Reference solution

Tree: Omit

Time complexity:  $O(h)$