

by Chris

2016/5/3 Review Test Submission: Week 09 Quiz - COMP90038\_2016\_SM1

Subjects Communities Manage Content

Haoyu Lin 66

Weekly Quizzes Review Test Submission: Week 09 Quiz

### Review Test Submission: Week 09 Quiz

User	Haoyu Lin
Subject	Algorithms and Complexity
Test	Week 09 Quiz
Started	10/05/16 3:46 PM
Submitted	10/05/16 5:46 PM
Due Date	11/05/16 11:59 PM
Status	Completed
Attempt Score	4 out of 4 points
Time Elapsed	2 hours, 0 minute
Instructions	You should attempt the quiz after the lecture and your tutorial.

- The quiz is available for a period of 10 days.
- You may attempt the quiz multiple times (if you happen to get a question wrong, you can do it again)
- Your score on the quiz will be recorded in the grade book. The score is not used when determining your final mark in this subject.
- The quiz might not display equations correctly in some browsers. If you experience problems, we recommend that you use Firefox.

**Note:** you must complete at least eight of the weekly quizzes to meet one of the hurdle requirements in this subject.

Results Displayed: All Answers, Submitted Answers, Feedback, Incorrectly Answered Questions

**Question 1** 1 out of 1 points

[https://app.lms.unimelb.edu.au/webapps/assessment/review/review.jsp?attempt\\_id=\\_12661043\\_1&course\\_id=\\_289856\\_1&content\\_id=\\_5286184\\_1&outcome\\_id=\\_11357038\\_1&outcome\\_definition\\_id=\\_1237929\\_1](https://app.lms.unimelb.edu.au/webapps/assessment/review/review.jsp?attempt_id=_12661043_1&course_id=_289856_1&content_id=_5286184_1&outcome_id=_11357038_1&outcome_definition_id=_1237929_1) 1/5

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If a binary tree is both a max-heap and an AVL tree, what is its largest possible number of nodes, assuming all keys are different?

Selected Answer: 2  
Response Feedback: That's right. Too easy.

**Question 2** 1 out of 1 points

A 2-3 tree is constructed by inserting, into an initially empty tree, the following keys, in the given order:  
F, O, R, E, S, T, B, U, I, L, D  
Click on the resulting 2-3 tree:

Selected Answer: 120, 266  
Answers:  
Student Response

[https://app.lms.unimelb.edu.au/webapps/assessment/review/review.jsp?attempt\\_id=\\_12661043\\_1&course\\_id=\\_289856\\_1&content\\_id=\\_5286184\\_1&outcome\\_id=\\_11357038\\_1&outcome\\_definition\\_id=\\_1237929\\_1](https://app.lms.unimelb.edu.au/webapps/assessment/review/review.jsp?attempt_id=_12661043_1&course_id=_289856_1&content_id=_5286184_1&outcome_id=_11357038_1&outcome_definition_id=_1237929_1) 2/5

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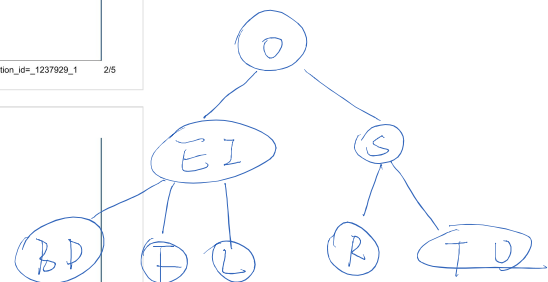
Response Feedback: Yes, an excellent choice.

**Question 3** 1 out of 1 points

A 2-3 tree has the shape shown here, and it contains the keys 1-5. Which of the following sequences (giving the order in which the keys are inserted) could have generated that shape? (There could be more than one.)

has to be: 2, 4, 1, 3, 5

[https://app.lms.unimelb.edu.au/webapps/assessment/review/review.jsp?attempt\\_id=\\_12661043\\_1&course\\_id=\\_289856\\_1&content\\_id=\\_5286184\\_1&outcome\\_id=\\_11357038\\_1&outcome\\_definition\\_id=\\_1237929\\_1](https://app.lms.unimelb.edu.au/webapps/assessment/review/review.jsp?attempt_id=_12661043_1&course_id=_289856_1&content_id=_5286184_1&outcome_id=_11357038_1&outcome_definition_id=_1237929_1) 3/5



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Selected Answers: a. 1, 2, 3, 4, 5

c. 1, 4, 2, 3, 5

d. 4, 3, 5, 2, 1

Answers:

a. 1, 2, 3, 4, 5

b. 1, 3, 5, 2, 4

c. 1, 4, 2, 3, 5

d. 4, 3, 5, 2, 1

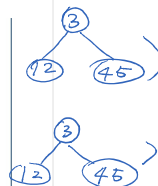
e. 5, 2, 3, 1, 4

Response Feedback: Yes, well done.

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b: 1,3,5 → ① ③ ⑤, ③ too high, impossible (actually

e: 5,2,3 → ⑤ ② ③, ③ too high, impossible. (actually

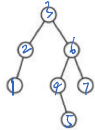


#### Question 4

1 out of 1 points



The AVL tree shown below was constructed by inserting the seven keys in a particular order. Identify which of the four insertion sequences below would generate an AVL tree of this shape.



Selected Answer: d. F, B, C, D, A, G, E

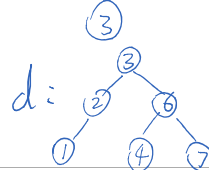
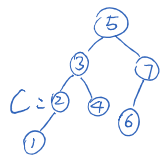
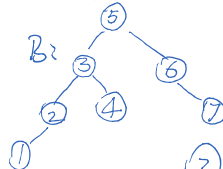
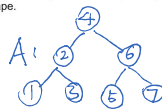
Answers:

a. A, B, C, D, E, F, G

b. B, C, D, E, F, G, A

c. C, E, G, B, D, F, A

d. F, B, C, D, A, G, E



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Response Feedback: Yes, that's right.

Friday, 3 June 2016 9:30:25 AM EST

← OK