

In the 4-queens problem,  $(x_1, x_2, x_3, x_4)$  correspond to the 4 queens' column indices. During backtracking,  $(1, 4, 2, ?)$  will be checked before  $(2, 4, 1, ?)$ , and none of them has any solution in their branches.

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What makes the time complexity analysis of a backtracking algorithm very difficult is that the number of solutions that do satisfy the restriction is hard to estimate.

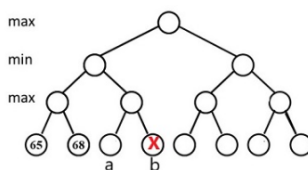
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答案正确: 1 分 [创建提问](#)

It is guaranteed that an exhaustive search can always find the solution in finite time.

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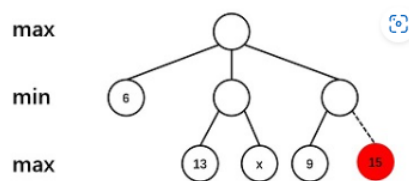
Given the following game tree, if node **b** is pruned with  $\alpha$ - $\beta$  pruning algorithm, which of the following statements about the value of node **a** is correct?



- ☐ A. less than 65
- ☒ B. greater than 68
- ☐ C. greater than 65
- ☐ D. less than 68

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Given the following game tree, the red node will be pruned with  $\alpha$ - $\beta$  pruning algorithm if and only if \_\_.



- ☒ A.  $x \geq 9$
- ☐ B.  $6 \leq x \leq 9$
- ☐ C.  $6 \leq x \leq 13$
- ☐ D.  $x \geq 13$

答案正确: 2 分 [创建提问](#)

Given the distance set  $D=\{1,1,2,2,2,2,3,3,3,4,5,5,5,6,6,8\}$  in a Turnpike Reconstruction problem, first it can be sure that  $x_1=0$  and  $x_6=8$ . Which of the following possible solutions will be checked next?

- ☐ A.  $x_2=1, x_5=6$
- ☐ B.  $x_3=3, x_5=6$
- ☒ C.  $x_2=2, x_5=6$
- ☐ D.  $x_2=1, x_5=5$

答案正确: 2 分

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