

EdX and its Members use cookies and other tracking technologies for performance, analytics, and marketing purposes. By using this website, you accept this use. Learn more about these technologies in the [Privacy Policy](#).



[Course](#) > [Week 10](#) > [Practic...](#) > Q7: Ga...

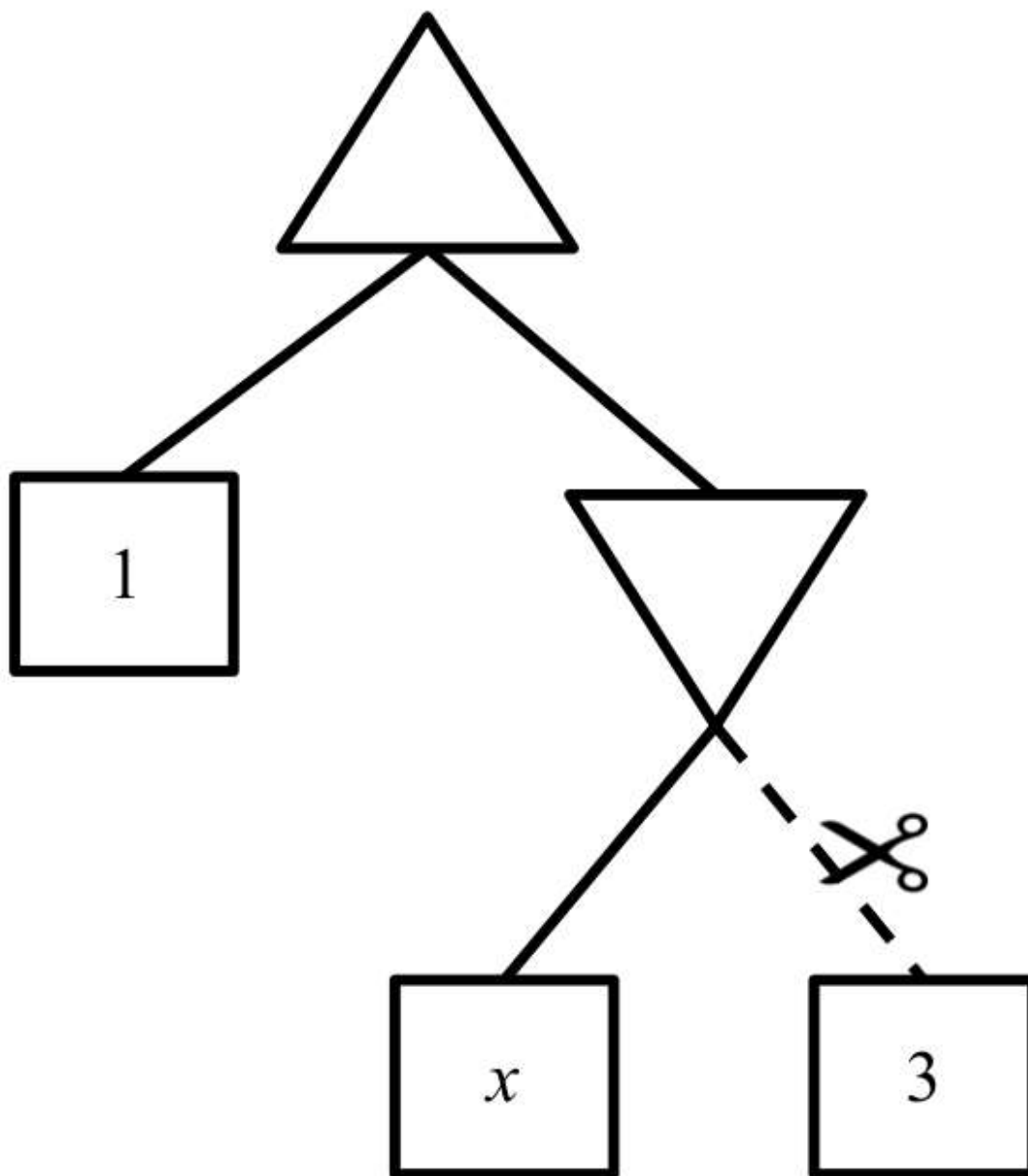
## Q7: Games: Alpha-Beta Pruning

### Problem 7: Games: Alpha-Beta Pruning

For each of the game-trees shown below, check for which values of  $x$  the dashed branch with the scissors will be pruned. If the pruning will not happen for any value of  $x$  check "None". If pruning will happen for all values of  $x$  check "All".

For all questions, choose the tightest bound possible. For example, if pruning occurs for  $x \geq 1$ , choose  $x \geq 1$  rather than  $x \geq 2$ . Also, for all questions, assume left-to-right traversal of the tree.

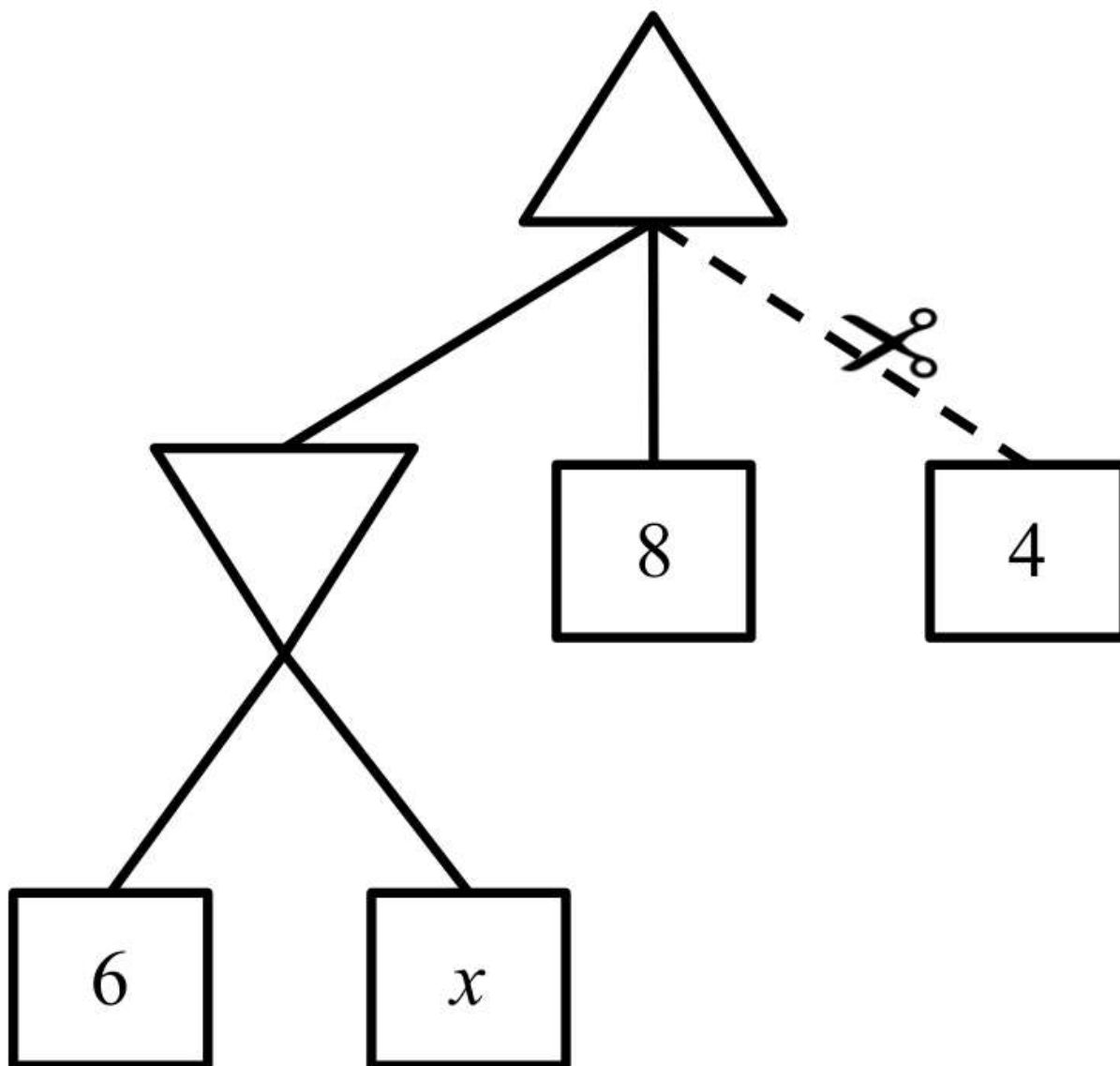
An example is shown below.



Example Tree. Answer:  $x \leq 1$ .

## Part 1

2/2 points (ungraded)

☐ All☒ None ✓☐  $x \leq 4$ ☐  $x \geq 4$ ☐  $x \leq 6$ ☐  $x \geq 6$

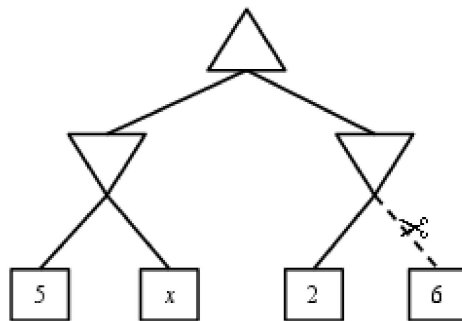
☐  $x \leq 8$

☐  $x \geq 8$

✓ Correct (2/2 points)

## Part 2

2/2 points (ungraded)

☐ All☐ None

☐  $x \leq 2$

☒  $x \geq 2$  ✓

☐  $x \leq 3$

☐  $x \geq 3$

☐  $x \leq 6$

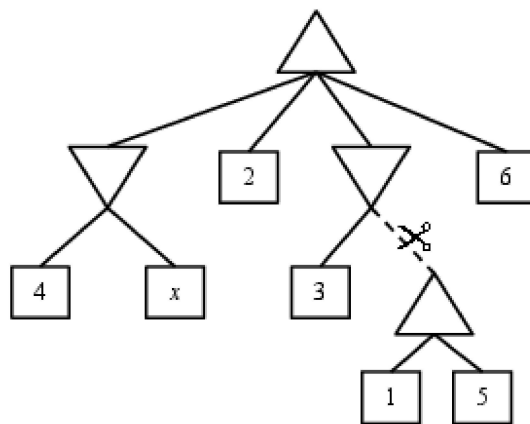
☐  $x \geq 6$ 

Submit

✓ Correct (2/2 points)

### Part 3

2/2 points (ungraded)


☐ All

☐ None

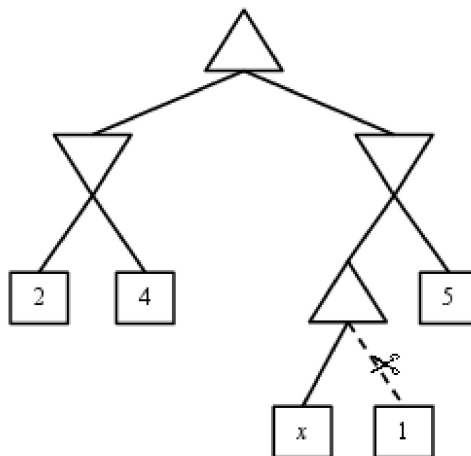
☐  $x \leq 1$ 
☐  $x \geq 1$ 
☐  $x \leq 2$ 
☐  $x \geq 2$ 
☐  $x \leq 3$

☒  $x \geq 3$  ✓☐  $x \leq 4$ ☐  $x \geq 4$ ☐  $x \leq 5$ ☐  $x \geq 5$ ☐  $x \leq 6$ ☐  $x \geq 6$ 

✓ Correct (2/2 points)

## Part 4

2/2 points (ungraded)

☐ All

☒ None ✓

☐  $x \leq 1$

☐  $x \geq 1$

☐  $x \leq 2$

☐  $x \geq 2$

☐  $x \leq 4$

☐  $x \geq 4$

☐  $x \leq 5$

☐  $x \geq 5$

Submit

✓ Correct (2/2 points)

© All Rights Reserved