

 **FOB1Q**

Started on	Monday, 27 November 2023, 7:17 PM
State	Finished
Completed on	Monday, 27 November 2023, 7:32 PM
Time taken	15 mins
Grade	4.00 out of 5.00 (80%)

### Question 1

Correct

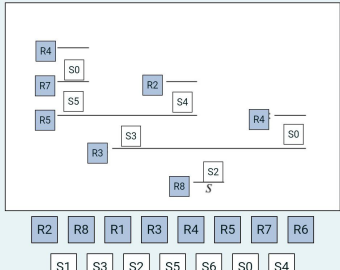
Mark 1.50 out of 1.50

Flag question

Let  $S, S_0, S_1, \dots, S_6$  be sequents. Given the following abstract inference rules:

$$\begin{array}{llll} \text{R1:} & & \text{R2:} & \overline{S_4} \\ \frac{S_0 \quad S_1}{S} & & \frac{S_3 \quad S_0}{S_2} & \text{R4:} \quad \overline{S_0} \\ \text{5:} & & & \\ \frac{S_5 \quad S_4}{S_3} & \text{R6:} & \frac{S_1}{S_5} & \text{R7:} \quad \frac{S_0}{S_5} \quad \text{R8:} \quad \frac{S_2}{S} \end{array}$$

Develop a formal proof tree of  $S$ , i.e. a proof tree with root  $S$ . On each transition from one node of the tree to its successor(s), i.e. next to the ":", mark the name of the inference rule that justifies this step. Drag the sequents and the rule names to the respective positions in the tree in order to retrieve a complete proof tree.



Die Antwort ist richtig.

### Question 2

Partially correct

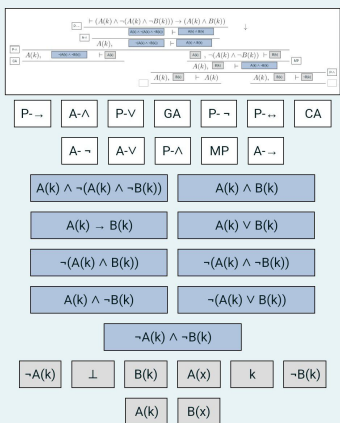
Mark 2.50 out of 3.50

🚩 Flag question

Complete the following proof tree, including the names of the rules that are applied at each step. The root of the tree is displayed at the top, the tree goes from top to bottom, i.e. the task is to prove that

$$(A(k) \wedge \neg(A(k) \wedge \neg B(k))) \rightarrow (A(k) \wedge B(k))$$

The rule name "GA" is an abbreviation for "GoalAssum" and "CA" abbreviates "ContrAssum"



Die Antwort ist teilweise richtig.

You have correctly selected 15.

## Finish review