Quiz

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PUI (Planning in Artificial Intelligence)

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What is an *optimal/perfect* heuristic h^* ?



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What is an *optimal/perfect* heuristic h^* ?

Answer: Maps each state to the length of a shortest path to any goal state.



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Answer: For each state $s: h(s) \le h^*(s)$.

What is it important for?



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Answer: If for a state s holds $h(s) = \infty$ then also $h^*(s) = \infty$.

What does it mean?



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Answer: If for a state s holds $h^*(s) = 0$ then also h(s) = 0.

What does it mean?



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Answer: For all states s let s' be its successor obtained via operator o with cost c. Then

$$h(s) \leq h(s') + c$$

What does it mean? What is it good for?



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Quiz

- ▶ goal-aware & safe ⇒ admissible
- ▶ goal-aware & consistent ⇒ admissible
- ▶ safe & consistent ⇒ admissible



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