Q6: Short Answer: Search

Problem 6: Short Answer: Search

Consider a graph search problem where for every action, the cost is at least ϵ, with $\epsilon > 0$. Assume the used heuristic is consistent. Select whether each of the following statements is true or false.

Part 1

1/1 point (ungraded)

Depth-first graph search is guaranteed to return an optimal solution.

- ○ True
- ◉ False ✔

Submit

✔ Correct (1/1 point)

Part 2

1/1 point (ungraded)

Breadth-first graph search is guaranteed to return an optimal solution.

- ○ True

- ◉ False ✔

Submit

✔ Correct (1/1 point)

Part 3

1/1 point (ungraded)

Uniform-cost graph search is guaranteed to return an optimal solution.

- ◉ True ✔
- ○ False

Submit

✔ Correct (1/1 point)

Part 4

1/1 point (ungraded)

Greedy graph search is guaranteed to return an optimal solution.

- ○ True
- ◉ False ✔

Submit

✔ Correct (1/1 point)

Part 5

1/1 point (ungraded)

A^* graph search (with a consistent heuristic) is guaranteed to return an optimal solution.

- ◉ True ✔
- ○ False

Submit

✔ Correct (1/1 point)

Part 6

1/1 point (ungraded)

A^* graph search (with a consistent heuristic) is guaranteed to expand no more nodes than depth-first graph search.

- ○ True
- ◉ False ✔

Submit

✔ Correct (1/1 point)

Part 7

1/1 point (ungraded)

A^* graph search (with a consistent heuristic) is guaranteed to expand no more nodes than uniform-cost graph search.

- (•) True ✔
- ( ) False

Submit

✔ Correct (1/1 point)