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## **Q6: Short Answer: Search**

Problem 6: Short Answer: Search

Consider a graph search problem where for every action, the cost is at least  $\epsilon$ , 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

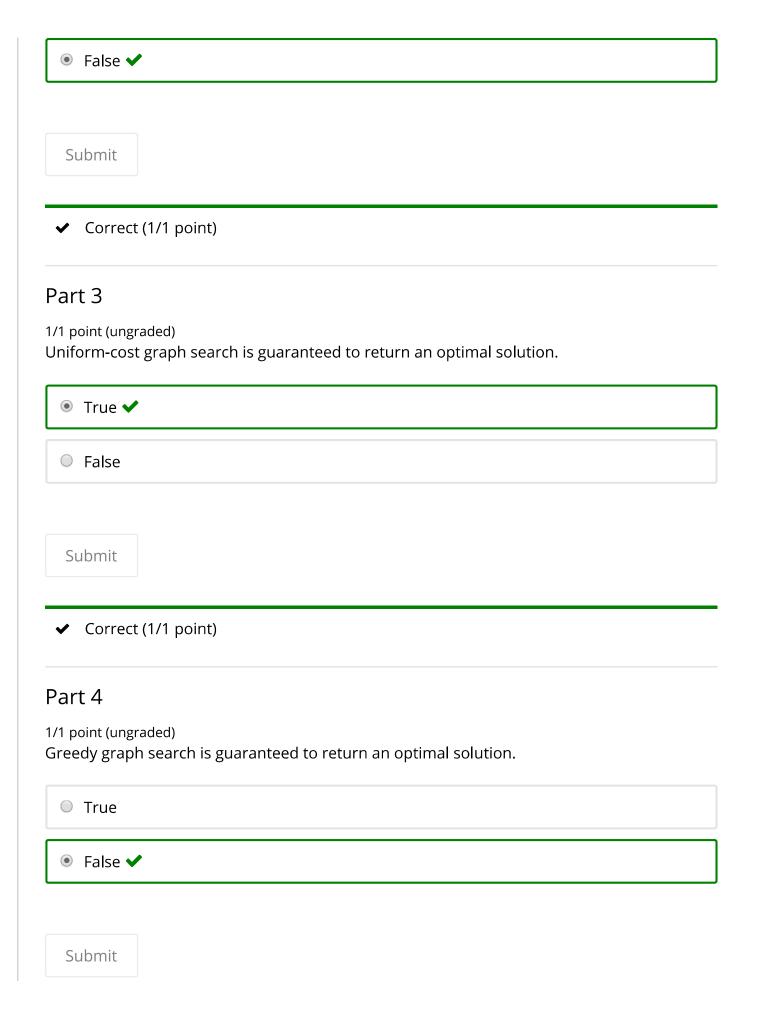
✓ Correct (1/1 point)

## Part 2

1/1 point (ungraded)

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

O True



| ✓ Correct (1/1 point)   |
|---|
| Part 5  |
| 1/1 point (ungraded) $m{A^*}$ graph search (with a consistent heuristic) is guaranteed to return an optimal solution.                         |
| ● True ✔  |
| O False   |
|   |
| Submit  |
| ✓ Correct (1/1 point)   |
| Part 6  |
| 1/1 point (ungraded) $m{A^*}$ graph search (with a consistent heuristic) is guaranteed to expand no more nodes than depth-first graph search. |
| O True  |
| ● False ✔   |
|   |
| Submit  |
| ✓ Correct (1/1 point)   |
|   |

| Part 7           |   |
|------------------|---|
|                  | aded)<br>arch (with a consistent heuristic) is guaranteed to expand no more nodes than<br>graph search. |
| ● True ✔         |   |
| O False          |   |
| Submit           |   |
| <b>✓</b> Correct | (1/1 point)   |

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