Graph-based Planning Methods

4 questions

1 point

1.

If you use the Grassfire or breadth first search procedure to plan a path through a grid from a node A to a node B, then you use the same procedure to plan a path from node B to node A, will the two paths have the same length?

- Yes
- No

1 point

2.

If you use the Grassfire or breadth first search procedure to plan a path through a grid from a node A to a node B, then you use the same procedure to plan a path from node B to node A, are the two paths guaranteed to be the same except in opposite directions?

- Yes
- No

1 point

3.

If you use the grassfire algorithm to plan a path through a series of grids with increasing dimension, 2 dimensional, 3 dimensional, 4 dimensional etc. The amount of computational effort required increases _____ with the dimension of the problem.

- linearly
- logarithmically
- exponentially
- quadratically

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1 point

4.

Generally speaking, which procedure would take less time to find a solution to a typical path planning problem on a discrete grid or graph?

- Grassfire/Breadth first search
- Dijksta's algorithm
- A*

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4 questions unanswered

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