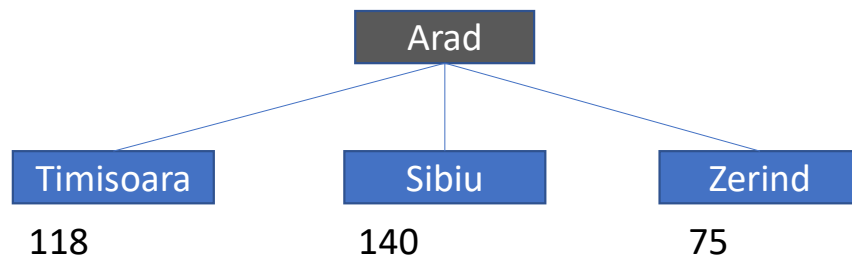
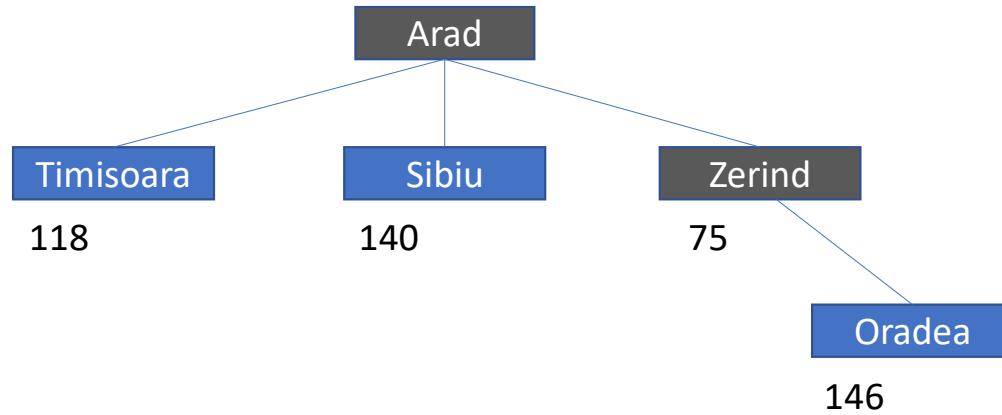


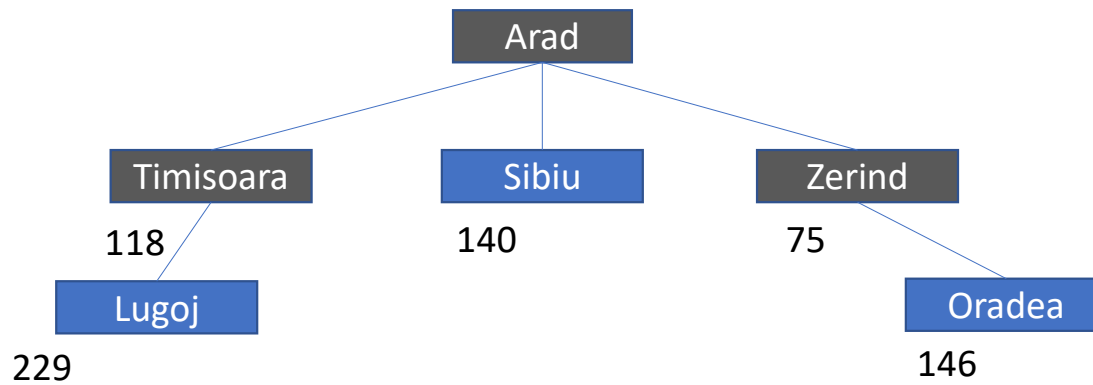
Uniform Cost



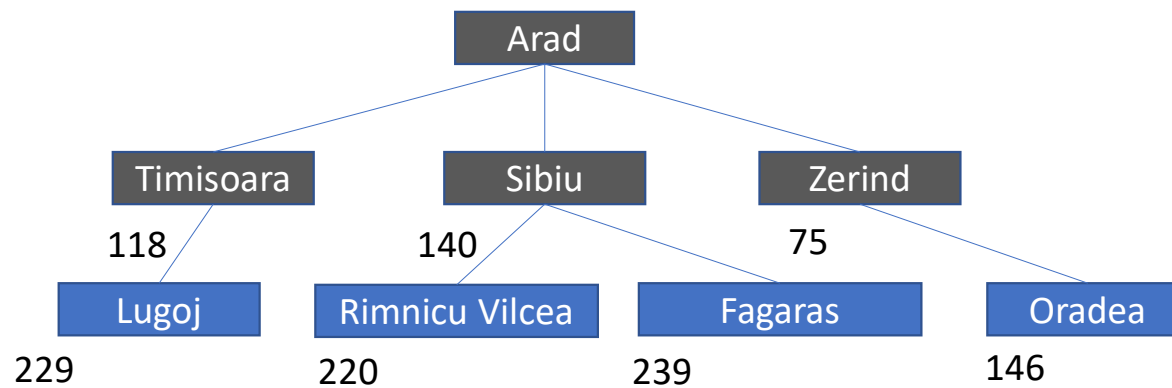
Explored
• Arad



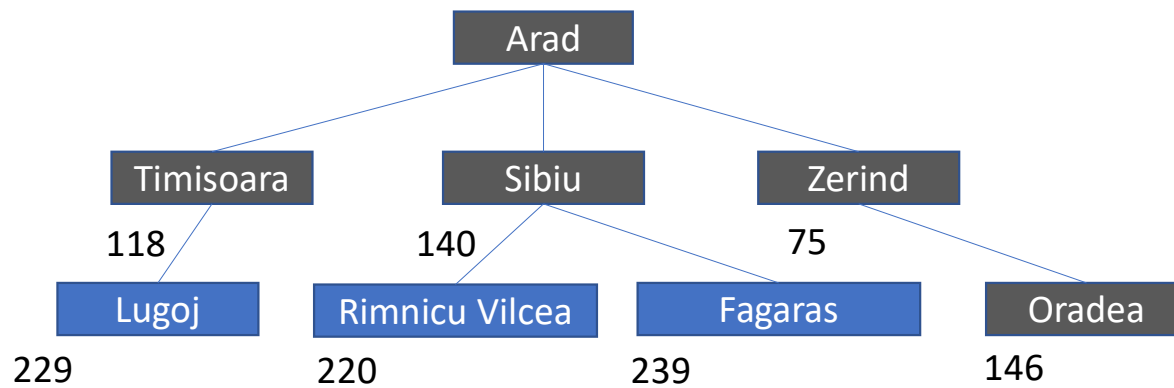
Explored
• Arad
• Zerind



- Explored
- Arad
 - Zerind
 - Timisoara

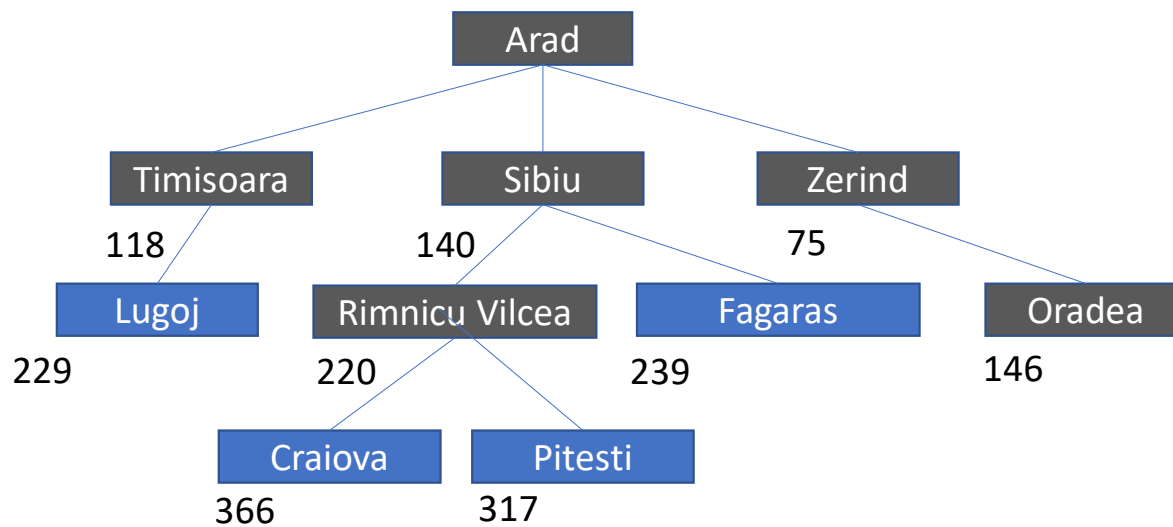


- Explored
- Arad
 - Zerind
 - Timisoara
 - Sibiu



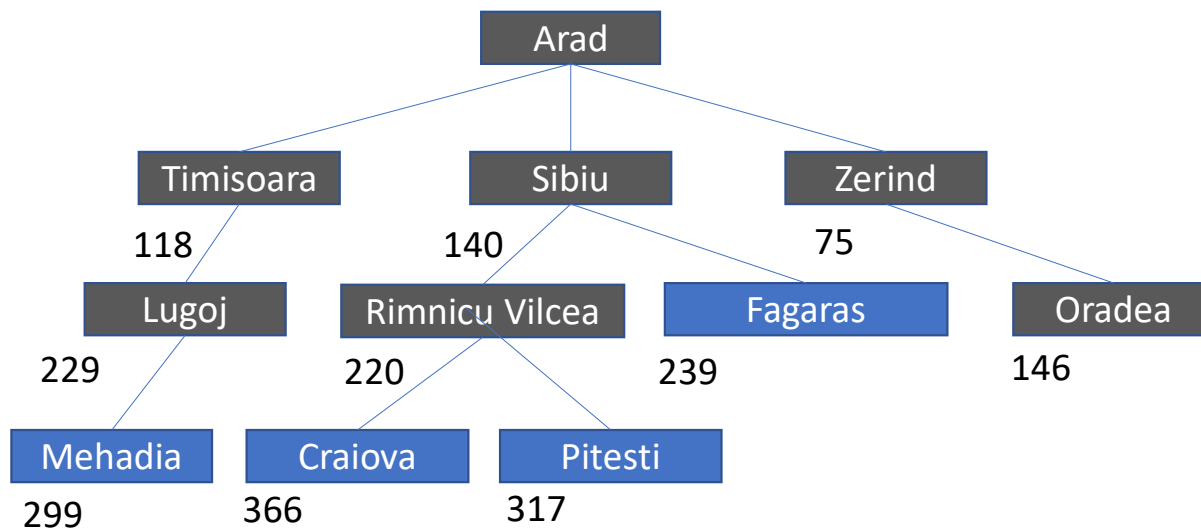
Explored

- Arad
- Zerind
- Timisoara
- **Sibiu**
- Oradea



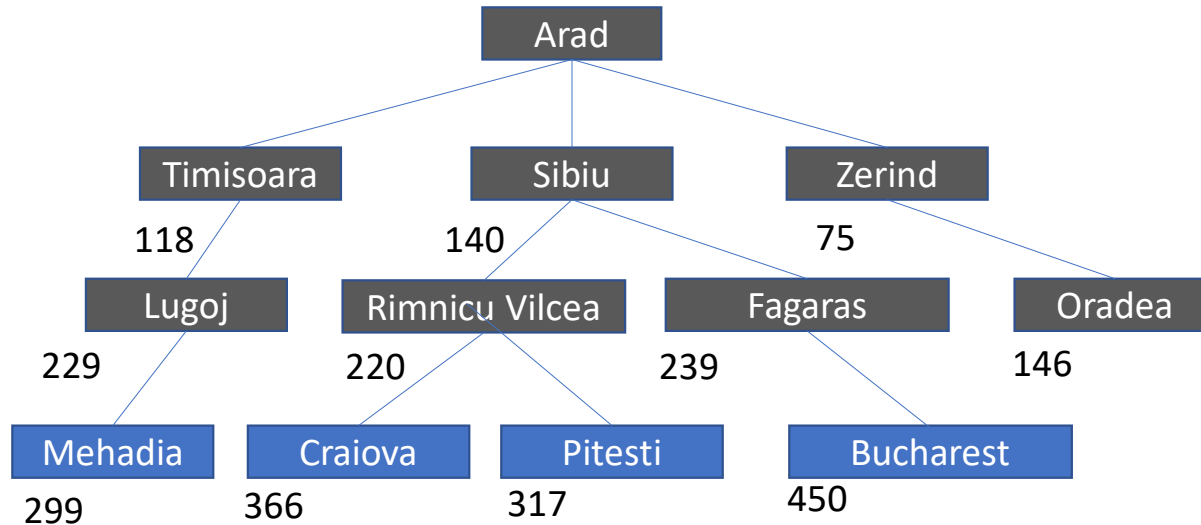
Explored

- Arad
- Zerind
- Timisoara
- Sibiu
- Oradea
- Rimnicu Vilcea



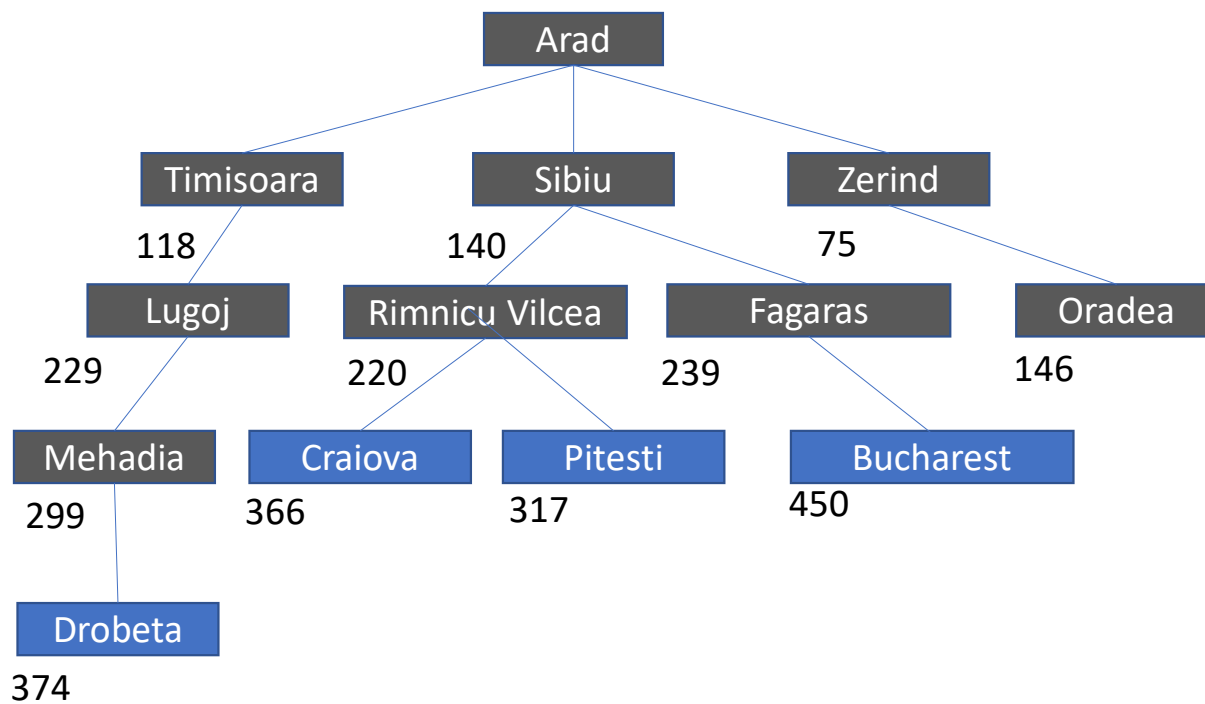
Explored

- Arad
- Zerind
- Timisoara
- Sibiu
- Oradea
- Rimnicu Vilcea
- Lugoj



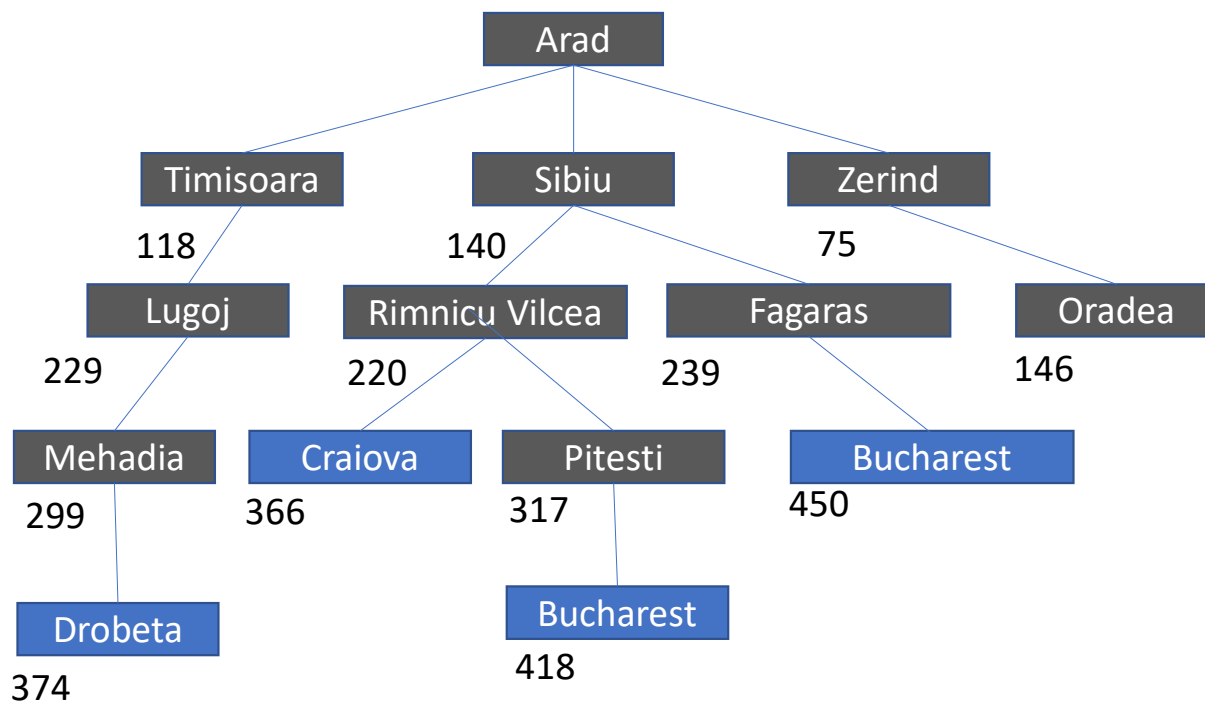
Explored

- Arad
- Zerind
- Timisoara
- Sibiu
- Oradea
- Rimnicu Vilcea
- Lugoj
- Fagaras



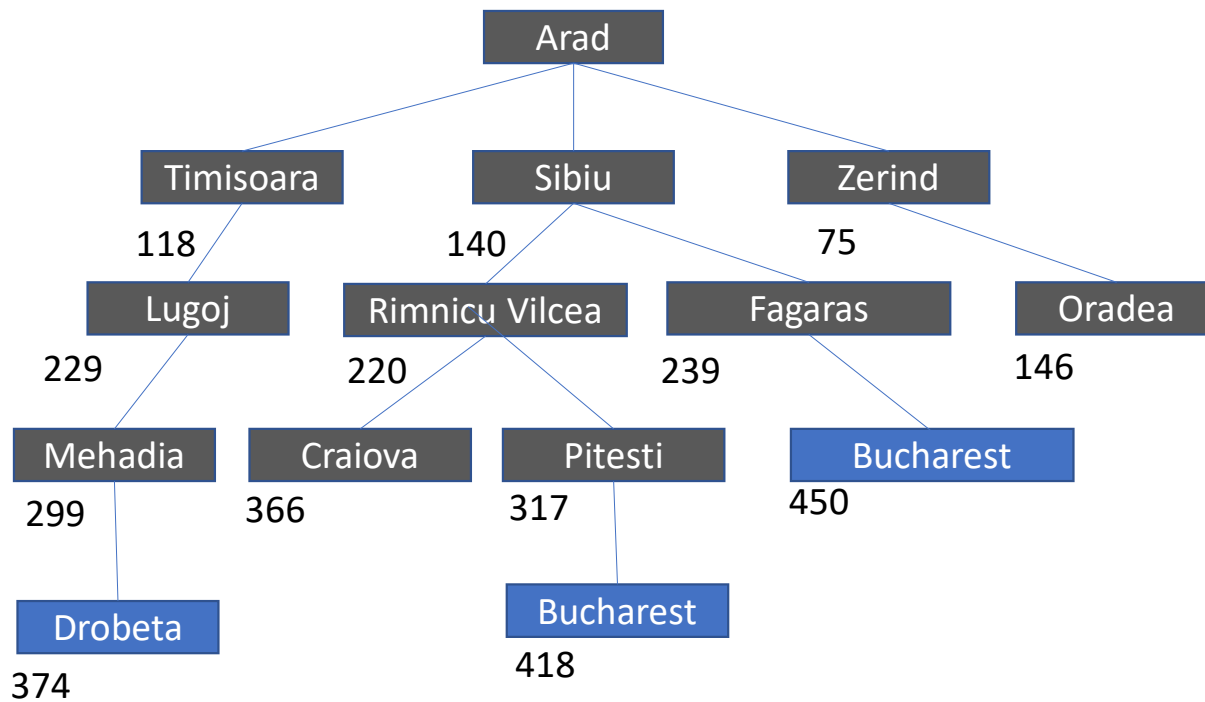
Explored

- Arad
- Zerind
- Timisoara
- Sibiu
- Oradea
- Rimnicu Vilcea
- Lugoj
- Fagaras
- Mehadia



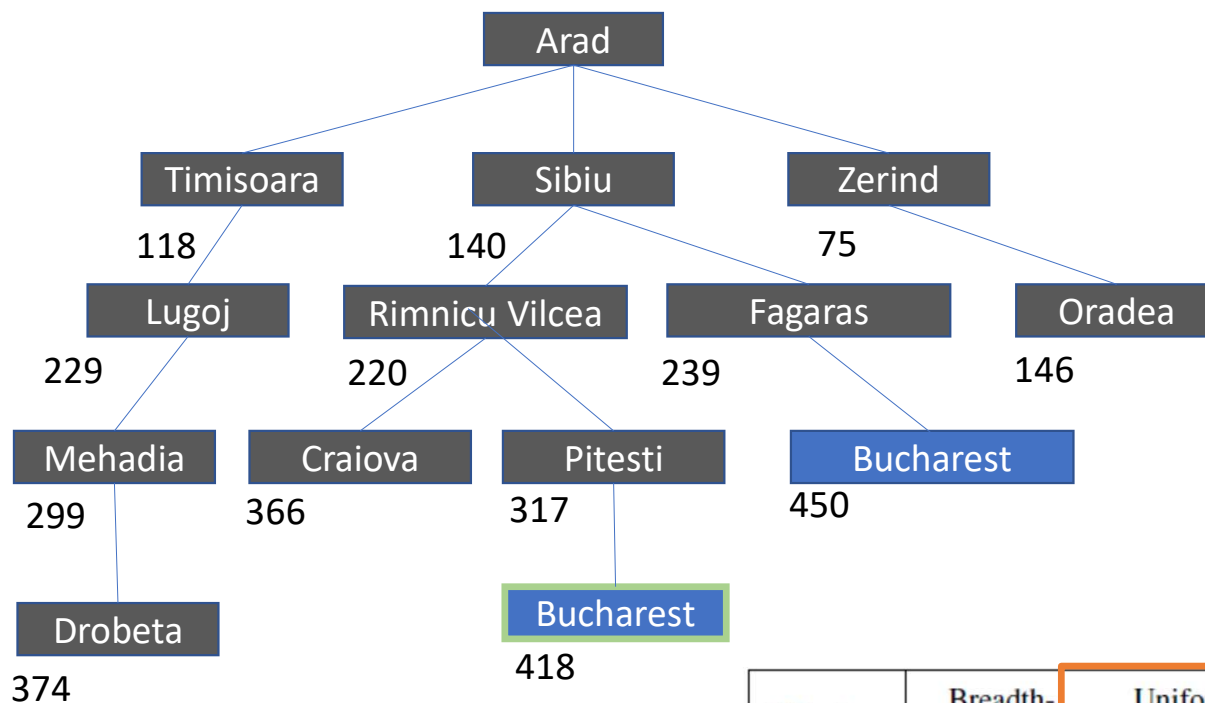
Explored

- Arad
- Zerind
- Timisoara
- Sibiu
- Oradea
- Rimnicu Vilcea
- Lugoj
- Fagaras
- Mehadia
- Pitesti



Explored

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- Rimnicu Vilcea
- Lugoj
- Fagaras
- Mehadia
- Pitesti
- Craiova



Explored

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- Rimnicu Vilcea
- Lugoj
- Fagaras
- Mehadia
- Pitesti
- Craiova
- Drobeta

| Criterion | Breadth-First | Uniform-Cost | Depth-First | Depth-Limited | Iterative Deepening | Bidirectional (if applicable) |
|-----------|------------------|---------------------------------------|-------------|---------------|---------------------|-------------------------------|
| Complete? | Yes ^a | Yes ^{a,b} | No | No | Yes ^a | Yes ^{a,d} |
| Time | $O(b^d)$ | $O(b^{1+\lceil C^*/\epsilon \rceil})$ | $O(b^m)$ | $O(b^l)$ | $O(b^d)$ | $O(b^{d/2})$ |
| Space | $O(b^d)$ | $O(b^{1+\lceil C^*/\epsilon \rceil})$ | $O(bm)$ | $O(b^l)$ | $O(bd)$ | $O(b^{d/2})$ |
| Optimal? | Yes ^c | Yes | No | No | Yes ^c | Yes ^{c,d} |

Figure 3.21 Evaluation of tree-search strategies. b is the branching factor; d is the depth of the shallowest solution; m is the maximum depth of the search tree; l is the depth limit. Superscript caveats are as follows: ^a complete if b is finite; ^b complete if step costs $\geq \epsilon$ for positive ϵ ; ^c optimal if step costs are all identical; ^d if both directions use breadth-first search.