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| **Problem ItrDFS** | **Length of path** | **Number of nodes** | **path** |
| Missionaries and Cannibals | 9 edges | 10 states expanded. | M on left:3  C on left:3  M on right:0  C on right:0  boat is on the left.  M on left:2  C on left:2  M on right:1  C on right:1  boat is on the right.  M on left:3  C on left:2  M on right:0  C on right:1  boat is on the left.  M on left:0  C on left:2  M on right:3  C on right:1  boat is on the right.  M on left:2  C on left:2  M on right:1  C on right:1  boat is on the left.  M on left:1  C on left:1  M on right:2  C on right:2  boat is on the right.  M on left:3  C on left:1  M on right:0  C on right:2  boat is on the left.  M on left:0  C on left:1  M on right:3  C on right:2  boat is on the right.  M on left:1  C on left:1  M on right:2  C on right:2  boat is on the left.  M on left:0  C on left:0  M on right:3  C on right:3  boat is on the right. |
| Farmer, Fox, Chicken, Grain | 9 edges | 11 states expanded. | Items on the left bank: ['F', 'f', 'C', 'G']  Items on the right bank: []  Farmer and Boat are on the left.  Items on the left bank: ['f', 'G']  Items on the right bank: ['C', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['f', 'G', 'F']  Items on the right bank: ['C']  Farmer and Boat are on the left.  Items on the left bank: ['G']  Items on the right bank: ['C', 'f', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['G', 'f', 'F']  Items on the right bank: ['C']  Farmer and Boat are on the left.  Items on the left bank: ['f']  Items on the right bank: ['C', 'G', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['f', 'C', 'F']  Items on the right bank: ['G']  Farmer and Boat are on the left.  Items on the left bank: ['C']  Items on the right bank: ['G', 'f', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['C', 'F']  Items on the right bank: ['G', 'f']  Farmer and Boat are on the left.  Items on the left bank: []  Items on the right bank: ['G', 'f', 'C', 'F']  Farmer and Boat are on the right. |
| Towers of Hanoi | 40 edges | 40 states expanded | [[4, 3, 2, 1] ,[] ,[]]  [[4, 3, 2] ,[1] ,[]]  [[4, 3] ,[1] ,[2]]  [[4, 3, 1] ,[] ,[2]]  [[4, 3] ,[] ,[2, 1]]  [[4] ,[3] ,[2, 1]]  [[4, 1] ,[3] ,[2]]  [[4] ,[3, 1] ,[2]]  [[4, 2] ,[3, 1] ,[]]  [[4, 2, 1] ,[3] ,[]]  [[4, 2] ,[3] ,[1]]  [[4] ,[3, 2] ,[1]]  [[4, 1] ,[3, 2] ,[]]  [[4] ,[3, 2, 1] ,[]]  [[] ,[3, 2, 1] ,[4]]  [[1] ,[3, 2] ,[4]]  [[] ,[3, 2] ,[4, 1]]  [[2] ,[3] ,[4, 1]]  [[2, 1] ,[3] ,[4]]  [[2] ,[3, 1] ,[4]]  [[] ,[3, 1] ,[4, 2]]  [[1] ,[3] ,[4, 2]]  [[] ,[3] ,[4, 2, 1]]  [[3] ,[] ,[4, 2, 1]]  [[3, 1] ,[] ,[4, 2]]  [[3] ,[1] ,[4, 2]]  [[3, 2] ,[1] ,[4]]  [[3, 2, 1] ,[] ,[4]]  [[3, 2] ,[] ,[4, 1]]  [[3] ,[2] ,[4, 1]]  [[3, 1] ,[2] ,[4]]  [[3] ,[2, 1] ,[4]]  [[] ,[2, 1] ,[4, 3]]  [[1] ,[2] ,[4, 3]]  [[] ,[2] ,[4, 3, 1]]  [[2] ,[] ,[4, 3, 1]]  [[2, 1] ,[] ,[4, 3]]  [[2] ,[1] ,[4, 3]]  [[] ,[1] ,[4, 3, 2]]  [[1] ,[] ,[4, 3, 2]]  [[] ,[] ,[4, 3, 2, 1]] |

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| **Problem ItrBFS** | **Length of path** | **Number of nodes** | **path** |
| Missionaries and Cannibals | 7 edges | 10 states expanded. | M on left:3  C on left:3  M on right:0  C on right:0  boat is on the left.  M on left:2  C on left:2  M on right:1  C on right:1  boat is on the right.  M on left:3  C on left:2  M on right:0  C on right:1  boat is on the left.  M on left:1  C on left:1  M on right:2  C on right:2  boat is on the right.  M on left:3  C on left:1  M on right:0  C on right:2  boat is on the left.  M on left:0  C on left:1  M on right:3  C on right:2  boat is on the right.  M on left:1  C on left:1  M on right:2  C on right:2  boat is on the left.  M on left:0  C on left:0  M on right:3  C on right:3  boat is on the right. |
| Farmer, Fox, Chicken, Grain | 7 edges | 15 states expanded. | Items on the left bank: ['F', 'f', 'C', 'G']  Items on the right bank: []  Farmer and Boat are on the left.  Items on the left bank: ['f', 'G']  Items on the right bank: ['C', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['f', 'G', 'F']  Items on the right bank: ['C']  Farmer and Boat are on the left.  Items on the left bank: ['G']  Items on the right bank: ['C', 'f', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['G', 'C', 'F']  Items on the right bank: ['f']  Farmer and Boat are on the left.  Items on the left bank: ['C']  Items on the right bank: ['f', 'G', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['C', 'F']  Items on the right bank: ['f', 'G']  Farmer and Boat are on the left.  Items on the left bank: []  Items on the right bank: ['f', 'G', 'C', 'F']  Farmer and Boat are on the right. |
| Towers of Hanoi | 18 edges | 70 states expanded. | [[4, 3, 2, 1] ,[] ,[]]  [[4, 3, 2] ,[1] ,[]]  [[4, 3] ,[1] ,[2]]  [[4, 3, 1] ,[] ,[2]]  [[4, 3] ,[] ,[2, 1]]  [[4] ,[3] ,[2, 1]]  [[4, 1] ,[3] ,[2]]  [[4, 1] ,[3, 2] ,[]]  [[4] ,[3, 2, 1] ,[]]  [[] ,[3, 2, 1] ,[4]]  [[1] ,[3, 2] ,[4]]  [[] ,[3, 2] ,[4, 1]]  [[2] ,[3] ,[4, 1]]  [[2, 1] ,[3] ,[4]]  [[2, 1] ,[] ,[4, 3]]  [[2] ,[1] ,[4, 3]]  [[] ,[1] ,[4, 3, 2]]  [[1] ,[] ,[4, 3, 2]]  [[] ,[] ,[4, 3, 2, 1]] |

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| **Problem IDDFS** | **Length of path** | **Number of nodes** | **path** |
| Missionaries and Cannibals | 9 edges | 11 states expanded. | M on left:3  C on left:3  M on right:0  C on right:0  boat is on the left.  M on left:2  C on left:2  M on right:1  C on right:1  boat is on the right.  M on left:3  C on left:2  M on right:0  C on right:1  boat is on the left.  M on left:0  C on left:2  M on right:3  C on right:1  boat is on the right.  M on left:2  C on left:2  M on right:1  C on right:1  boat is on the left.  M on left:1  C on left:1  M on right:2  C on right:2  boat is on the right.  M on left:3  C on left:1  M on right:0  C on right:2  boat is on the left.  M on left:0  C on left:1  M on right:3  C on right:2  boat is on the right.  M on left:1  C on left:1  M on right:2  C on right:2  boat is on the left.  M on left:0  C on left:0  M on right:3  C on right:3  boat is on the right. |
| Farmer, Fox, Chicken, Grain | 9 edges | 30 states expanded. | Items on the left bank: ['F', 'f', 'C', 'G']  Items on the right bank: []  Farmer and Boat are on the left.  Items on the left bank: ['f', 'G']  Items on the right bank: ['C', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['f', 'G', 'F']  Items on the right bank: ['C']  Farmer and Boat are on the left.  Items on the left bank: ['G']  Items on the right bank: ['C', 'f', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['G', 'f', 'F']  Items on the right bank: ['C']  Farmer and Boat are on the left.  Items on the left bank: ['f']  Items on the right bank: ['C', 'G', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['f', 'C', 'F']  Items on the right bank: ['G']  Farmer and Boat are on the left.  Items on the left bank: ['C']  Items on the right bank: ['G', 'f', 'F']  Farmer and Boat are on the right.  Items on the left bank: ['C', 'F']  Items on the right bank: ['G', 'f']  Farmer and Boat are on the left.  Items on the left bank: []  Items on the right bank: ['G', 'f', 'C', 'F']  Farmer and Boat are on the right. |
| Towers of Hanoi | 40 edges | 104 states expanded. | [[4, 3, 2, 1] ,[] ,[]]  [[4, 3, 2] ,[1] ,[]]  [[4, 3] ,[1] ,[2]]  [[4, 3, 1] ,[] ,[2]]  [[4, 3] ,[] ,[2, 1]]  [[4] ,[3] ,[2, 1]]  [[4, 1] ,[3] ,[2]]  [[4] ,[3, 1] ,[2]]  [[4, 2] ,[3, 1] ,[]]  [[4, 2, 1] ,[3] ,[]]  [[4, 2] ,[3] ,[1]]  [[4] ,[3, 2] ,[1]]  [[4, 1] ,[3, 2] ,[]]  [[4] ,[3, 2, 1] ,[]]  [[] ,[3, 2, 1] ,[4]]  [[1] ,[3, 2] ,[4]]  [[] ,[3, 2] ,[4, 1]]  [[2] ,[3] ,[4, 1]]  [[2, 1] ,[3] ,[4]]  [[2] ,[3, 1] ,[4]]  [[] ,[3, 1] ,[4, 2]]  [[1] ,[3] ,[4, 2]]  [[] ,[3] ,[4, 2, 1]]  [[3] ,[] ,[4, 2, 1]]  [[3, 1] ,[] ,[4, 2]]  [[3] ,[1] ,[4, 2]]  [[3, 2] ,[1] ,[4]]  [[3, 2, 1] ,[] ,[4]]  [[3, 2] ,[] ,[4, 1]]  [[3] ,[2] ,[4, 1]]  [[3, 1] ,[2] ,[4]]  [[3] ,[2, 1] ,[4]]  [[] ,[2, 1] ,[4, 3]]  [[1] ,[2] ,[4, 3]]  [[] ,[2] ,[4, 3, 1]]  [[2] ,[] ,[4, 3, 1]]  [[2, 1] ,[] ,[4, 3]]  [[2] ,[1] ,[4, 3]]  [[] ,[1] ,[4, 3, 2]]  [[1] ,[] ,[4, 3, 2]]  [[] ,[] ,[4, 3, 2, 1]] |