

Problem	ItrDFS	Length of path	Number of nodes	path
Missionaries and Cannibals		9 edges	10 states expanded.	<p>M on left:3 C on left:3 M on right:0 C on right:0 boat is on the left.</p> <p>M on left:2 C on left:2 M on right:1 C on right:1 boat is on the right.</p> <p>M on left:3 C on left:2 M on right:0 C on right:1 boat is on the left.</p> <p>M on left:0 C on left:2 M on right:3 C on right:1 boat is on the right.</p> <p>M on left:2 C on left:2 M on right:1 C on right:1 boat is on the left.</p> <p>M on left:1 C on left:1 M on right:2 C on right:2 boat is on the right.</p> <p>M on left:3 C on left:1 M on right:0</p>

			<p>C on right:2 boat is on the left.</p> <p>M on left:0 C on left:1 M on right:3 C on right:2 boat is on the right.</p> <p>M on left:1 C on left:1 M on right:2 C on right:2 boat is on the left.</p> <p>M on left:0 C on left:0 M on right:3 C on right:3 boat is on the right.</p>
Farmer, Fox, Chicken, Grain	9 edges	11 states expanded.	<p>Items on the left bank: ['F', 'f', 'C', 'G'] Items on the right bank: [] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['f', 'G'] Items on the right bank: ['C', 'F'] Farmer and Boat are on the right.</p> <p>Items on the left bank: ['f', 'G', 'F'] Items on the right bank: ['C'] Farmer and Boat are on the left.</p>

			<p>Items on the left bank: ['G'] Items on the right bank: ['C', 'f', 'F'] Farmer and Boat are on the right.</p> <p>Items on the left bank: ['G', 'f', 'F'] Items on the right bank: ['C'] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['f'] Items on the right bank: ['C', 'G', 'F'] Farmer and Boat are on the right.</p> <p>Items on the left bank: ['f', 'C', 'F'] Items on the right bank: ['G'] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['C'] Items on the right bank: ['G', 'f', 'F'] Farmer and Boat are on the right.</p> <p>Items on the left bank: ['C', 'F'] Items on the right bank: ['G', 'f']</p>
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			<p>Farmer and Boat are on the left.</p> <p>Items on the left bank: []</p> <p>Items on the right bank: ['G', 'f', 'C', 'F']</p> <p>Farmer and Boat are on the right.</p>
Towers of Hanoi	40 edges	40 states expanded	<p>[[4, 3, 2, 1], [], []]</p> <p>[[4, 3, 2], [1], []]</p> <p>[[4, 3], [1], [2]]</p> <p>[[4, 3, 1], [], [2]]</p> <p>[[4, 3], [], [2, 1]]</p> <p>[[4], [3], [2, 1]]</p> <p>[[4, 1], [3], [2]]</p> <p>[[4], [3, 1], [2]]</p> <p>[[4, 2], [3, 1], []]</p> <p>[[4, 2, 1], [3], []]</p> <p>[[4, 2], [3], [1]]</p> <p>[[4], [3, 2], [1]]</p> <p>[[4, 1], [3, 2], []]</p> <p>[[4], [3, 2, 1], []]</p> <p>[], [3, 2, 1], [4]</p> <p>[[1], [3, 2], [4]]</p> <p>[], [3, 2], [4, 1]]</p> <p>[[2], [3], [4, 1]]</p> <p>[[2, 1], [3], [4]]</p> <p>[[2], [3, 1], [4]]</p> <p>[], [3, 1], [4, 2]]</p> <p>[[1], [3], [4, 2]]</p> <p>[], [3], [4, 2, 1]]</p> <p>[[3], [], [4, 2, 1]]</p> <p>[[3, 1], [], [4, 2]]</p> <p>[[3], [1], [4, 2]]</p> <p>[[3, 2], [1], [4]]</p> <p>[[3, 2, 1], [], [4]]</p> <p>[[3, 2], [], [4, 1]]</p> <p>[[3], [2], [4, 1]]</p> <p>[[3, 1], [2], [4]]</p> <p>[[3], [2, 1], [4]]</p> <p>[], [2, 1], [4, 3]]</p> <p>[[1], [2], [4, 3]]</p> <p>[], [2], [4, 3, 1]]</p> <p>[[2], [], [4, 3, 1]]</p>

			[[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.	<p>M on left:3 C on left:3 M on right:0 C on right:0 boat is on the left.</p> <p>M on left:2 C on left:2 M on right:1 C on right:1 boat is on the right.</p> <p>M on left:3 C on left:2 M on right:0 C on right:1 boat is on the left.</p> <p>M on left:1 C on left:1 M on right:2 C on right:2 boat is on the right.</p> <p>M on left:3 C on left:1 M on right:0 C on right:2 boat is on the left.</p> <p>M on left:0 C on left:1 M on right:3 C on right:2</p>

			<p>boat is on the right.</p> <p>M on left:1 C on left:1 M on right:2 C on right:2 boat is on the left.</p> <p>M on left:0 C on left:0 M on right:3 C on right:3 boat is on the right.</p>
Farmer, Fox, Chicken, Grain	7 edges	15 states expanded.	<p>Items on the left bank: ['F', 'f', 'C', 'G'] Items on the right bank: [] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['f', 'G'] Items on the right bank: ['C', 'F'] Farmer and Boat are on the right.</p> <p>Items on the left bank: ['f', 'G', 'F'] Items on the right bank: ['C'] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['G'] Items on the right bank: ['C', 'f', 'F'] Farmer and Boat are on the right.</p>

			<p>Items on the left bank: ['G', 'C', 'F'] Items on the right bank: ['f'] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['C'] Items on the right bank: ['f', 'G', 'F'] Farmer and Boat are on the right.</p> <p>Items on the left bank: ['C', 'F'] Items on the right bank: ['f', 'G'] Farmer and Boat are on the left.</p> <p>Items on the left bank: [] Items on the right bank: ['f', 'G', 'C', 'F'] Farmer and Boat are on the right.</p>
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.	<p>M on left:3 C on left:3 M on right:0 C on right:0 boat is on the left.</p> <p>M on left:2 C on left:2 M on right:1 C on right:1 boat is on the right.</p> <p>M on left:3 C on left:2 M on right:0 C on right:1 boat is on the left.</p> <p>M on left:0 C on left:2 M on right:3 C on right:1 boat is on the right.</p> <p>M on left:2 C on left:2 M on right:1 C on right:1 boat is on the left.</p> <p>M on left:1 C on left:1 M on right:2 C on right:2 boat is on the right.</p>

			<p>M on left:3 C on left:1 M on right:0 C on right:2 boat is on the left.</p> <p>M on left:0 C on left:1 M on right:3 C on right:2 boat is on the right.</p> <p>M on left:1 C on left:1 M on right:2 C on right:2 boat is on the left.</p> <p>M on left:0 C on left:0 M on right:3 C on right:3 boat is on the right.</p>
Farmer, Fox, Chicken, Grain	9 edges	30 states expanded.	<p>Items on the left bank: ['F', 'f', 'C', 'G'] Items on the right bank: [] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['f', 'G'] Items on the right bank: ['C', 'F'] Farmer and Boat are on the right.</p> <p>Items on the left bank: ['f', 'G', 'F']</p>

			<p>Items on the right bank: ['C'] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['G'] Items on the right bank: ['C', 'f', 'F'] Farmer and Boat are on the right.</p> <p>Items on the left bank: ['G', 'f', 'F'] Items on the right bank: ['C'] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['f'] Items on the right bank: ['C', 'G', 'F'] Farmer and Boat are on the right.</p> <p>Items on the left bank: ['f', 'C', 'F'] Items on the right bank: ['G'] Farmer and Boat are on the left.</p> <p>Items on the left bank: ['C'] Items on the right bank: ['G', 'f', 'F'] Farmer and Boat are on the right.</p>
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			<p>Items on the left bank: ['C', 'F'] Items on the right bank: ['G', 'f'] Farmer and Boat are on the left.</p> <p>Items on the left bank: [] Items on the right bank: ['G', 'f', 'C', 'F'] Farmer and Boat are on the right.</p>
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]]

			<div><div>[] , [2, 1] , [4, 3]</div><div>[[1] , [2] , [4, 3]</div><div>[] , [2] , [4, 3, 1]</div><div>[[2] , [] , [4, 3, 1]</div><div>[[2, 1] , [] , [4, 3]</div><div>[[2] , [1] , [4, 3]</div><div>[] , [1] , [4, 3, 2]</div><div>[[1] , [] , [4, 3, 2]</div><div>[] , [] , [4, 3, 2, 1]</div></div>
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