Partnership: YES

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Part 8: UCS on Different Puzzles

Puzzle	Runtime (s)	Solution path length	Total cost of solution path	Number of states expanded	Maximum length of open list
[[3,1,2],[4,5,0],[6,7,8]]	0.0839112	8	8.0	265	179
A:[[3,0,1],[6,4,2],[7,8,5]]	0.0365716	7	7.0	166	101
B:[[3,1,2],[6,8,7],[5,4,0]]	1.8814914	12	12.0	1490	898
C:[[4,5,0],[1,2,8],[3,7,6]]	13.0488009	14	14.0	4070	2290
D:[[0,8,2],[1,7,4],[3,6,5]]	52.527613	16	16.0	7982	4700

Part 10: Results with Heuristics for the Eight Puzzle

Puzzle	Heuristic	Solved?	# Solution Edges	Solution Cost	# Expanded	Max OPEN	Runtime (s)
A	none (UCS)	Y	8	8	166	101	0.0365716
A	Hamming	Y	7	7	7	6	0.0025661
A	Manhattan	Y	7	7	7	6	0.0021442
B	none (UCS)	Y	12	12	1490	898	1.8814914
B	Hamming	Y	12	12	94	72	0.5563653
B	Manhattan	Y	12	12	33	25	0.0877799
C	none (UCS)	Y	14	14	4070	2290	13.048800
C	Hamming	Y	14	14	189	127	2.0892082
C	Manhattan	Y	14	14	56	39	0.2377406
D	none (UCS)	Y	16	16	7982	4700	52.527613
D	Hamming	Y	16	16	589	368	8.3579514
D	Manhattan	Y	16	16	148	96	1.4067503