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Assignment 2 Report -- Heuristic Search

CSE 415: Introduction to Artificial Intelligence
Winter, 2021

1. Results with Heuristics for the Eight Puzzle

Puzzle A: [3,0,1,6,4,2,7,8,5]
Puzzle B: [3,1,2,6,8,7,5,4,0]
Puzzle C: [4,5,0,1,2,8,3,7,6]
Puzzle D: [0,8,2,1,7,4,3,6,5]

Puzzle	Heuristic	Solved?	# Soln Edges	Soln Cost	# Expanded	Max OPEN
Puzzle A	UCS	Y	7	7.0	166	101
Puzzle A	Hamming	Y	7	7.0	7	6
Puzzle A	Manhattan	Y	7	7	7	6
Puzzle B	UCS	Y	12	12.0	1490	898
Puzzle B	Hamming	Y	12	12.0	95	72
Puzzle B	Manhattan	Y	12	172.0	6192	3332
Puzzle C	UCS	Y	14	14.0	4070	2290
Puzzle C	Hamming	Y	14	14.0	189	127
Puzzle C	Manhattan	Y	14	14	56	39
Puzzle D	UCS	Y	16	16.0	7982	4700
Puzzle D	Hamming	Y	16	16.0	589	368
Puzzle D	Manhattan	Y	16	16.0	148	96