

Heuristics for the Eight Puzzle

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(i) [[3,0,1],[6,4,2],[7,8,5]]

	Uniform Cost Search	Hamming Distance	Manhattan Distance
success	Yes	Yes	Yes
the length of solution path	7	7	7
total cost of the path	7	7	7
number of states expanded	166	7	7
MAX_OPEN_LENGTH	101	6	6

(ii) [[3,1,2],[6,8,7],[5,4,0]]

	Uniform Cost Search	Hamming Distance	Manhattan Distance
success	Yes	Yes	Yes
the length of solution path	12	12	12
total cost of the path	12	12	12
number of states expanded	1490	94	33
MAX_OPEN_LENGTH	898	72	25

(iii) [[4,5,0],[1,2,8],[3,7,6]]

	Uniform Cost Search	Hamming Distance	Manhattan Distance
success	Yes	Yes	Yes
the length of solution path	14	14	14
total cost of the path	14	14	14
number of states expanded	4070	189	56
MAX_OPEN_LENGTH	2290	127	39

(iv) [[0,8,2],[1,7,4],[3,6,5]]

	Uniform Cost Search	Hamming Distance	Manhattan Distance
success	Yes	Yes	Yes
the length of solution path	16	16	16
total cost of the path	16	16	16
number of states expanded	7982	589	148
MAX_OPEN_LENGTH	4700	368	96