Question 3 part (c) results

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Test uniform cost search with h1()

Exploring state: 8,8, cost: 0
Checking neighbor 8,7 of 8,8
Adding state: 8,7 with total cost: 1
Exploring state: 8,7, cost: 1
Checking neighbor 8,6 of 8,7
Adding state: 8,6 with total cost: 2
Checking neighbor 8,8 of 8,7
Exploring state: 8,6, cost: 2
Checking neighbor 8,5 of 8,6
Adding state: 8,5 with total cost: 3
Checking neighbor 8,7 of 8,6
Checking neighbor 7,6 of 8,6
Adding state: 7,6 with total cost: 3
Exploring state: 8,5, cost: 3
Checking neighbor 8,4 of 8,5
Adding state: 8,4 with total cost: 4
Checking neighbor 8,6 of 8,5
Exploring state: 7,6, cost: 3
Checking neighbor 6,6 of 7,6
Adding state: 6,6 with total cost: 4
Checking neighbor 8,6 of 7,6
Exploring state: 8,4, cost: 4
Checking neighbor 8,3 of 8,4
Adding state: 8,3 with total cost: 5
Checking neighbor 8,5 of 8,4
Exploring state: 6,6, cost: 4
Checking neighbor 6,5 of 6,6
Adding state: 6,5 with total cost: 5
Checking neighbor 7,6 of 6,6
Checking neighbor 6,7 of 6,6
Adding state: 6,7 with total cost: 5
Exploring state: 8,3, cost: 5
Checking neighbor 8,4 of 8,3
Exploring state: 6,5, cost: 5
Checking neighbor 5,5 of 6,5
Adding state: 5,5 with total cost: 6
Checking neighbor 6,6 of 6,5
Exploring state: 6,7, cost: 5
Checking neighbor 6,6 of 6,7

Checking neighbor 6,8 of 6,7
Adding state: 6,8 with total cost: 6
Exploring state: 5,5, cost: 6
Checking neighbor 5,4 of 5,5
Adding state: 5,4 with total cost: 7
Checking neighbor 6,5 of 5,5
Exploring state: 6,8, cost: 6
Checking neighbor 6,7 of 6,8
Checking neighbor 5,8 of 6,8
Adding state: 5,8 with total cost: 7
Exploring state: 5,4, cost: 7
Checking neighbor 5,5 of 5,4
Checking neighbor 5,3 of 5,4
Adding state: 5,3 with total cost: 8
Checking neighbor 4,4 of 5,4
Adding state: 4,4 with total cost: 8
Exploring state: 5,8, cost: 7
Checking neighbor 4,8 of 5,8
Adding state: 4,8 with total cost: 8
Checking neighbor 6,8 of 5,8
Exploring state: 5,3, cost: 8
Checking neighbor 5,2 of 5,3
Adding state: 5,2 with total cost: 9
Checking neighbor 5,4 of 5,3
Exploring state: 4,4, cost: 8
Checking neighbor 3,4 of 4,4
Adding state: 3,4 with total cost: 9
Checking neighbor 5,4 of 4,4
Exploring state: 4,8, cost: 8
Checking neighbor 5,8 of 4,8
Exploring state: 5,2, cost: 9
Checking neighbor 5,1 of 5,2
Adding state: 5,1 with total cost: 10
Checking neighbor 5,3 of 5,2
Exploring state: 3,4, cost: 9
Checking neighbor 3,5 of 3,4
Adding state: 3,5 with total cost: 10
Checking neighbor 4,4 of 3,4
Exploring state: 5,1, cost: 10
Checking neighbor 6,1 of 5,1
Adding state: 6,1 with total cost: 11
Checking neighbor 5,2 of 5,1
Exploring state: 3,5, cost: 10
Checking neighbor 3,4 of 3,5

Checking neighbor 3,6 of 3,5
Adding state: 3,6 with total cost: 11
Exploring state: 6,1, cost: 11
Checking neighbor 5,1 of 6,1
Exploring state: 3,6, cost: 11
Checking neighbor 3,5 of 3,6
Checking neighbor 3,7 of 3,6
Adding state: 3,7 with total cost: 12
Exploring state: 3,7, cost: 12
Checking neighbor 3,6 of 3,7
Checking neighbor 2,7 of 3,7
Adding state: 2,7 with total cost: 13
Exploring state: 2,7, cost: 13
Checking neighbor 1,7 of 2,7
Adding state: 1,7 with total cost: 14
Checking neighbor 3,7 of 2,7
Exploring state: 1,7, cost: 14
Checking neighbor 1,6 of 1,7
Adding state: 1,6 with total cost: 15
Checking neighbor 2,7 of 1,7
Exploring state: 1,6, cost: 15
Checking neighbor 1,5 of 1,6
Adding state: 1,5 with total cost: 16
Checking neighbor 1,7 of 1,6
Exploring state: 1,5, cost: 16
Checking neighbor 1,4 of 1,5
Adding state: 1,4 with total cost: 17
Checking neighbor 1,6 of 1,5
Exploring state: 1,4, cost: 17
Checking neighbor 1,3 of 1,4
Adding state: 1,3 with total cost: 18
Checking neighbor 1,5 of 1,4
Exploring state: 1,3, cost: 18
Checking neighbor 1,2 of 1,3
Adding state: 1,2 with total cost: 19
Checking neighbor 1,4 of 1,3
Exploring state: 1,2, cost: 19
Checking neighbor 1,1 of 1,2
Adding state: 1,1 with total cost: 20
Checking neighbor 1,3 of 1,2
Exploring state: 1,1, cost: 20
Total states generated: 32

Test A* with sld()

Exploring state: 8,8, cost: 0
Checking neighbor 8,7 of 8,8
Adding state: 8,7 with total cost: 10.219544457292887
Exploring state: 8,7, cost: 10.219544457292887
Checking neighbor 8,6 of 8,7
Adding state: 8,6 with total cost: 19.821869724335514
Checking neighbor 8,8 of 8,7
Exploring state: 8,6, cost: 19.821869724335514
Checking neighbor 8,5 of 8,6
Adding state: 8,5 with total cost: 28.884127472634063
Checking neighbor 8,7 of 8,6
Checking neighbor 7,6 of 8,6
Adding state: 7,6 with total cost: 28.632119400242168
Exploring state: 7,6, cost: 28.632119400242168
Checking neighbor 6,6 of 7,6
Adding state: 6,6 with total cost: 36.70318721210764
Checking neighbor 8,6 of 7,6
Exploring state: 8,5, cost: 28.884127472634063
Checking neighbor 8,4 of 8,5
Adding state: 8,4 with total cost: 37.49990057849797
Checking neighbor 8,6 of 8,5
Exploring state: 6,6, cost: 36.70318721210764
Checking neighbor 6,5 of 6,6
Adding state: 6,5 with total cost: 44.10631144954049
Checking neighbor 7,6 of 6,6
Checking neighbor 6,7 of 6,6
Adding state: 6,7 with total cost: 45.5134368880143
Exploring state: 8,4, cost: 37.49990057849797
Checking neighbor 8,3 of 8,4
Adding state: 8,3 with total cost: 45.78001046777849
Checking neighbor 8,5 of 8,4
Exploring state: 6,5, cost: 44.10631144954049
Checking neighbor 5,5 of 6,5
Adding state: 5,5 with total cost: 50.763165699032875
Checking neighbor 6,6 of 6,5
Exploring state: 6,7, cost: 45.5134368880143
Checking neighbor 6,6 of 6,7
Checking neighbor 6,8 of 6,7
Adding state: 6,8 with total cost: 55.11576215505693
Exploring state: 8,3, cost: 45.78001046777849
Checking neighbor 8,4 of 8,3
Exploring state: 5,5, cost: 50.763165699032875

Checking neighbor 5,4 of 5,5
Adding state: 5,4 with total cost: 56.763165699032875
Checking neighbor 6,5 of 5,5
Exploring state: 6,8, cost: 55.11576215505693
Checking neighbor 6,7 of 6,8
Checking neighbor 5,8 of 6,8
Adding state: 5,8 with total cost: 64.17801990335548
Exploring state: 5,4, cost: 56.763165699032875
Checking neighbor 5,5 of 5,4
Checking neighbor 5,3 of 5,4
Adding state: 5,3 with total cost: 62.235301654032455
Checking neighbor 4,4 of 5,4
Adding state: 4,4 with total cost: 62.00580638615216
Exploring state: 4,4, cost: 62.00580638615216
Checking neighbor 3,4 of 4,4
Adding state: 3,4 with total cost: 66.61135766161615
Checking neighbor 5,4 of 4,4
Exploring state: 5,3, cost: 62.235301654032455
Checking neighbor 5,2 of 5,3
Adding state: 5,2 with total cost: 67.35840727965011
Checking neighbor 5,4 of 5,3
Exploring state: 5,8, cost: 64.17801990335548
Checking neighbor 4,8 of 5,8
Adding state: 4,8 with total cost: 72.79379300921939
Checking neighbor 6,8 of 5,8
Exploring state: 3,4, cost: 66.61135766161615
Checking neighbor 3,5 of 3,4
Adding state: 3,5 with total cost: 72.08349361661573
Checking neighbor 4,4 of 3,4
Exploring state: 5,2, cost: 67.35840727965011
Checking neighbor 5,1 of 5,2
Adding state: 5,1 with total cost: 72.35840727965011
Checking neighbor 5,3 of 5,2
Exploring state: 3,5, cost: 72.08349361661573
Checking neighbor 3,4 of 3,5
Checking neighbor 3,6 of 3,5
Adding state: 3,6 with total cost: 78.46865842375023
Exploring state: 5,1, cost: 72.35840727965011
Checking neighbor 6,1 of 5,1
Adding state: 6,1 with total cost: 78.35840727965011
Checking neighbor 5,2 of 5,1
Exploring state: 4,8, cost: 72.79379300921939
Checking neighbor 5,8 of 4,8
Exploring state: 6,1, cost: 78.35840727965011

Checking neighbor 5,1 of 6,1
Exploring state: 3,6, cost: 78.46865842375023
Checking neighbor 3,5 of 3,6
Checking neighbor 3,7 of 3,6
Adding state: 3,7 with total cost: 85.79321374408698
Exploring state: 3,7, cost: 85.79321374408698
Checking neighbor 3,6 of 3,7
Checking neighbor 2,7 of 3,7
Adding state: 2,7 with total cost: 92.87597627438521
Exploring state: 2,7, cost: 92.87597627438521
Checking neighbor 1,7 of 2,7
Adding state: 1,7 with total cost: 99.87597627438521
Checking neighbor 3,7 of 2,7
Exploring state: 1,7, cost: 99.87597627438521
Checking neighbor 1,6 of 1,7
Adding state: 1,6 with total cost: 105.87597627438521
Checking neighbor 2,7 of 1,7
Exploring state: 1,6, cost: 105.87597627438521
Checking neighbor 1,5 of 1,6
Adding state: 1,5 with total cost: 110.87597627438521
Checking neighbor 1,7 of 1,6
Exploring state: 1,5, cost: 110.87597627438521
Checking neighbor 1,4 of 1,5
Adding state: 1,4 with total cost: 114.87597627438521
Checking neighbor 1,6 of 1,5
Exploring state: 1,4, cost: 114.87597627438521
Checking neighbor 1,3 of 1,4
Adding state: 1,3 with total cost: 117.87597627438521
Checking neighbor 1,5 of 1,4
Exploring state: 1,3, cost: 117.87597627438521
Checking neighbor 1,2 of 1,3
Adding state: 1,2 with total cost: 119.87597627438521
Checking neighbor 1,4 of 1,3
Exploring state: 1,2, cost: 119.87597627438521
Checking neighbor 1,1 of 1,2
Adding state: 1,1 with total cost: 120.87597627438521
Checking neighbor 1,3 of 1,2
Exploring state: 1,1, cost: 120.87597627438521
Total states generated: 32