**This is sample output representation for our source code**

ENTER THE N VALUE GREATER THAN 3: 4

ENTER NUMBER OF ITERATIONS REQUIRED(MUST BE GREATER THAN OR EQUAL TO 1: 100

ENTER NUMBER OF MAXIMUM SIDEWAYS ALLOWED(MUST BE >=1): 3

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (2, 3)]

|-|Q|-|-|

|-|-|Q|-|

|-|-|-|Q|

|Q|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

|-|Q|-|-|

|-|-|-|-|

|-|-|Q|Q|

|Q|-|-|-|

Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (2, 3)]

|-|Q|-|-|

|-|-|Q|-|

|-|-|-|Q|

|Q|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

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|-|-|Q|Q|

|Q|-|-|-|

Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|-|-|Q|-|

|Q|-|-|-|

Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (2, 3)]

|-|-|-|-|

|-|Q|-|-|

|-|-|Q|Q|

|Q|-|-|-|

Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (0, 3)]

|-|-|-|Q|

|Q|-|Q|-|

|-|Q|-|-|

|-|-|-|-|

Step number--> 2

[(1, 0), (3, 1), (1, 2), (0, 3)]

|-|-|-|Q|

|Q|-|Q|-|

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|-|Q|-|-|

Step number--> 3

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

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|-|Q|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (1, 2), (3, 3)]

|-|Q|-|-|

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (2, 3)]

|Q|Q|-|-|

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|-|-|-|Q|

|-|-|Q|-|

Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (1, 3)]

|-|-|-|-|

|Q|-|Q|Q|

|-|Q|-|-|

|-|-|-|-|

Step number--> 2

[(0, 0), (2, 1), (1, 2), (1, 3)]

|Q|-|-|-|

|-|-|Q|Q|

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Step number--> 3

[(0, 0), (2, 1), (3, 2), (1, 3)]

|Q|-|-|-|

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|-|Q|-|-|

|-|-|Q|-|

Step number--> 4

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (2, 2), (3, 3)]

|Q|-|-|-|

|-|Q|-|-|

|-|-|Q|-|

|-|-|-|Q|

Step number--> 2

[(0, 0), (1, 1), (1, 2), (3, 3)]

|Q|-|-|-|

|-|Q|Q|-|

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|-|-|-|Q|

Step number--> 3

[(0, 0), (3, 1), (1, 2), (3, 3)]

|Q|-|-|-|

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|-|-|-|-|

|-|Q|-|Q|

Step number--> 4

[(0, 0), (3, 1), (1, 2), (2, 3)]

|Q|-|-|-|

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|-|Q|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (2, 2), (3, 3)]

|Q|-|-|-|

|-|Q|-|-|

|-|-|Q|-|

|-|-|-|Q|

Step number--> 2

[(0, 0), (1, 1), (2, 2), (2, 3)]

|Q|-|-|-|

|-|Q|-|-|

|-|-|Q|Q|

|-|-|-|-|

Step number--> 3

[(3, 0), (1, 1), (2, 2), (2, 3)]

|-|-|-|-|

|-|Q|-|-|

|-|-|Q|Q|

|Q|-|-|-|

Step number--> 4

[(3, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

Step number--> 5

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (3, 2), (3, 3)]

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|Q|Q|-|-|

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|-|-|Q|Q|

Step number--> 2

[(1, 0), (1, 1), (3, 2), (0, 3)]

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|Q|Q|-|-|

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|-|-|Q|-|

Step number--> 3

[(2, 0), (1, 1), (3, 2), (0, 3)]

|-|-|-|Q|

|-|Q|-|-|

|Q|-|-|-|

|-|-|Q|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (2, 2), (3, 3)]

|-|-|-|-|

|-|-|-|-|

|Q|Q|Q|-|

|-|-|-|Q|

Step number--> 2

[(2, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

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|Q|Q|-|-|

|-|-|-|Q|

Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (1, 3)]

|-|Q|Q|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|-|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (3, 3)]

|-|Q|-|-|

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|Q|-|-|Q|

Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (3, 2), (1, 3)]

|-|-|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|Q|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (3, 2), (1, 3)]

|-|-|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|Q|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (2, 2), (3, 3)]

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|-|Q|-|-|

|Q|-|Q|-|

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Step number--> 2

[(2, 0), (0, 1), (2, 2), (3, 3)]

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|Q|-|Q|-|

|-|-|-|Q|

Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (2, 3)]

|-|Q|Q|-|

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Step number--> 2

[(3, 0), (0, 1), (0, 2), (2, 3)]

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|Q|-|-|-|

Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (1, 3)]

|-|Q|Q|-|

|-|-|-|Q|

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|Q|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (1, 3)]

|-|Q|Q|-|

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (2, 2), (2, 3)]

|-|Q|-|-|

|Q|-|-|-|

|-|-|Q|Q|

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (3, 3)]

|-|Q|Q|-|

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (1, 2), (0, 3)]

|Q|-|-|Q|

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|-|Q|-|-|

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (0, 3)]

|Q|-|-|Q|

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|-|-|-|-|

|-|Q|-|-|

Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

|Q|-|-|-|

|-|-|Q|-|

|-|-|-|Q|

|-|Q|-|-|

Step number--> 4

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (2, 2), (2, 3)]

|-|-|-|-|

|Q|Q|-|-|

|-|-|Q|Q|

|-|-|-|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (2, 3)]

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (2, 2), (2, 3)]

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|Q|Q|-|-|

|-|-|Q|Q|

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Step number--> 2

[(1, 0), (1, 1), (2, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (2, 2), (0, 3)]

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|-|Q|-|-|

Step number--> 4

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (1, 3)]

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|Q|-|Q|Q|

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|-|Q|-|-|

Step number--> 2

[(1, 0), (3, 1), (1, 2), (2, 3)]

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|Q|-|Q|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (2, 2), (1, 3)]

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|Q|-|-|Q|

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|-|-|-|-|

Step number--> 2

[(3, 0), (2, 1), (2, 2), (1, 3)]

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|-|Q|Q|-|

|Q|-|-|-|

Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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|Q|-|-|-|

Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

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|Q|-|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

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|-|Q|-|-|

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (3, 2), (3, 3)]

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|-|-|Q|Q|

Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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|-|-|-|Q|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (3, 2), (1, 3)]

|-|-|-|-|

|-|Q|-|Q|

|Q|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (3, 2), (1, 3)]

|-|-|-|-|

|-|Q|-|Q|

|Q|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|Q|-|-|

|-|-|Q|-|

|-|-|-|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|-|Q|-|-|

|-|-|-|-|

|Q|-|-|-|

Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|Q|Q|-|Q|

|-|-|-|-|

Step number--> 2

[(0, 0), (2, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

|-|-|-|-|

|-|Q|-|Q|

|-|-|-|-|

Step number--> 3

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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|-|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (2, 2), (3, 3)]

|-|-|-|-|

|Q|Q|-|-|

|-|-|Q|-|

|-|-|-|Q|

Step number--> 2

[(1, 0), (0, 1), (2, 2), (3, 3)]

|-|Q|-|-|

|Q|-|-|-|

|-|-|Q|-|

|-|-|-|Q|

Step number--> 3

[(1, 0), (0, 1), (2, 2), (0, 3)]

|-|Q|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|-|-|-|

Step number--> 4

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Step number--> 5

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (3, 2), (3, 3)]

|-|-|-|-|

|-|Q|-|-|

|-|-|-|-|

|Q|-|Q|Q|

Step number--> 2

[(3, 0), (1, 1), (3, 2), (2, 3)]

|-|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

|Q|-|Q|-|

Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (3, 2), (3, 3)]

|-|-|-|-|

|-|Q|-|-|

|-|-|-|-|

|Q|-|Q|Q|

Step number--> 2

[(3, 0), (1, 1), (3, 2), (2, 3)]

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|-|Q|-|-|

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|Q|-|Q|-|

Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

Step number--> 4

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|Q|Q|-|Q|

|-|-|-|-|

Step number--> 2

[(2, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

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|Q|Q|-|-|

|-|-|-|Q|

Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (2, 2), (2, 3)]

|Q|Q|-|-|

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|-|-|Q|Q|

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

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|-|-|Q|Q|

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 3

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (2, 2), (2, 3)]

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|Q|Q|-|-|

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Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 3

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (0, 2), (1, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (2, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (0, 2), (1, 3)]

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|Q|Q|-|Q|

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Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (2, 3)]

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Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (2, 2), (2, 3)]

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|-|Q|-|-|

|Q|-|Q|Q|

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Step number--> 2

[(3, 0), (1, 1), (2, 2), (2, 3)]

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|Q|-|-|-|

Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (2, 2), (2, 3)]

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|Q|-|Q|Q|

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Step number--> 2

[(3, 0), (1, 1), (2, 2), (2, 3)]

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Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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|Q|-|-|-|

Step number--> 4

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

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|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (2, 2), (0, 3)]

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|Q|Q|-|-|

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (2, 2), (2, 3)]

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|-|-|Q|Q|

|Q|Q|-|-|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (3, 3)]

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|Q|-|Q|-|

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (3, 2), (0, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (3, 2), (0, 3)]

|Q|-|-|Q|

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 3

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (2, 3)]

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|-|Q|Q|-|

Step number--> 2

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (3, 2), (2, 3)]

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Step number--> 2

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (0, 3)]

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (2, 2), (0, 3)]

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|Q|-|Q|-|

|-|Q|-|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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|-|Q|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (1, 3)]

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|Q|Q|Q|-|

Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (0, 2), (1, 3)]

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Step number--> 2

[(2, 0), (3, 1), (1, 2), (1, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (1, 3)]

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|-|Q|-|-|

Step number--> 4

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 5

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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|-|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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|Q|-|-|-|

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (2, 3)]

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|Q|Q|Q|-|

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|-|-|-|-|

Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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|Q|-|-|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (2, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (2, 2), (2, 3)]

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Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (3, 2), (0, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (1, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 3

[(0, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (2, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (2, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (2, 3)]

|Q|Q|-|-|

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Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (2, 3)]

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|-|Q|Q|Q|

|Q|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

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|-|-|Q|Q|

|Q|-|-|-|

Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (3, 3)]

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|-|-|Q|-|

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|Q|-|-|Q|

Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (2, 3)]

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|Q|-|-|-|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (0, 2), (1, 3)]

|Q|Q|Q|-|

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Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (1, 2), (0, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (3, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (2, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (3, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (3, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (1, 3)]

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Step number--> 2

[(1, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (3, 2), (2, 3)]

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Step number--> 2

[(1, 0), (3, 1), (3, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (0, 2), (1, 3)]

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Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (0, 2), (1, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (1, 2), (0, 3)]

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Step number--> 2

[(0, 0), (2, 1), (1, 2), (1, 3)]

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Step number--> 3

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (2, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (3, 2), (1, 3)]

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|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (3, 2), (2, 3)]

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|-|Q|-|Q|

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

|Q|-|-|-|

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 3

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (1, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (1, 2), (1, 3)]

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Step number--> 3

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 3

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (1, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (1, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (3, 3)]

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Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (3, 3)]

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Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

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|Q|-|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (3, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (3, 2), (2, 3)]

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Step number--> 2

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (3, 2), (2, 3)]

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Step number--> 2

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (0, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (3, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 3

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (3, 3)]

|Q|Q|-|-|

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (2, 2), (1, 3)]

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Step number--> 2

[(2, 0), (0, 1), (2, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 4

[(2, 0), (0, 1), (3, 2), (0, 3)]

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|Q|-|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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|-|Q|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (2, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (3, 3)]

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Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 2

[(2, 0), (3, 1), (1, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 4

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (2, 2), (3, 3)]

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Step number--> 2

[(0, 0), (1, 1), (2, 2), (0, 3)]

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Step number--> 3

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (2, 2), (3, 3)]

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Step number--> 2

[(0, 0), (1, 1), (1, 2), (3, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (3, 3)]

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Step number--> 4

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 5

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (2, 3)]

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (3, 2), (0, 3)]

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Step number--> 2

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (3, 2), (0, 3)]

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Step number--> 2

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|Q|-|-|-|

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (0, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (0, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (3, 2), (2, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (3, 2), (2, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 4

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (1, 2), (3, 3)]

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Step number--> 2

[(0, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 4

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (2, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (2, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (3, 2), (3, 3)]

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Step number--> 2

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (2, 2), (3, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (3, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 4

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (1, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (3, 2), (0, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 3

[(0, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (3, 2), (2, 3)]

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (0, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (0, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (3, 2), (2, 3)]

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Step number--> 2

[(2, 0), (2, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|Q|-|-|-|

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(2, 0), (2, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (3, 2), (2, 3)]

|-|Q|-|-|

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|Q|-|-|Q|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|-|-|

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (3, 3)]

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|-|-|Q|-|

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|Q|-|-|Q|

Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (3, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (3, 2), (3, 3)]

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|Q|-|Q|Q|

Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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|Q|-|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (0, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (1, 2), (3, 3)]

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Step number--> 2

[(3, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (0, 3)]

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|Q|-|-|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (3, 2), (0, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (3, 2), (0, 3)]

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (0, 3)]

|Q|-|Q|Q|

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Step number--> 2

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (2, 2), (2, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (2, 2), (1, 3)]

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|Q|-|Q|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (2, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (3, 2), (2, 3)]

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|Q|-|Q|-|

Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (0, 2), (2, 3)]

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|Q|Q|-|Q|

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Step number--> 2

[(3, 0), (2, 1), (0, 2), (2, 3)]

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|-|Q|-|Q|

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Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (3, 2), (3, 3)]

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Step number--> 2

[(3, 0), (1, 1), (3, 2), (2, 3)]

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Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (3, 2), (2, 3)]

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Step number--> 2

[(1, 0), (3, 1), (3, 2), (2, 3)]

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|-|Q|Q|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (3, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (2, 2), (1, 3)]

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Step number--> 2

[(0, 0), (1, 1), (3, 2), (1, 3)]

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Step number--> 3

[(0, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (2, 2), (1, 3)]

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Step number--> 2

[(0, 0), (1, 1), (3, 2), (1, 3)]

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Step number--> 3

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (3, 2), (3, 3)]

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|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 2

[(2, 0), (3, 1), (1, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (2, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (1, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (3, 3)]

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Step number--> 2

[(0, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (0, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (3, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (3, 2), (2, 3)]

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Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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|Q|-|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (1, 2), (3, 3)]

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|Q|Q|-|-|

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Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (0, 2), (3, 3)]

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|Q|Q|-|-|

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 3

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (1, 3)]

|-|-|Q|-|

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|Q|Q|-|-|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (1, 3)]

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|Q|Q|-|-|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (0, 2), (3, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (0, 3)]

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (1, 2), (3, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 3

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (0, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (0, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (3, 2), (2, 3)]

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|Q|Q|-|-|

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Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (2, 3)]

|-|Q|Q|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (1, 3)]

|-|Q|Q|-|

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|Q|-|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (1, 3)]

|-|Q|Q|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (1, 3)]

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|Q|Q|-|-|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (1, 2), (0, 3)]

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|Q|Q|-|-|

Step number--> 2

[(0, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

|Q|-|-|-|

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Step number--> 4

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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|-|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (0, 3)]

|Q|Q|-|Q|

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Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 2

[(2, 0), (2, 1), (3, 2), (1, 3)]

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|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (1, 3)]

|-|-|Q|-|

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (0, 2), (3, 3)]

|Q|-|Q|-|

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Step number--> 2

[(0, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (1, 2), (1, 3)]

|-|Q|-|-|

|-|-|Q|Q|

|Q|-|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (1, 2), (0, 3)]

|Q|-|-|Q|

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Step number--> 2

[(0, 0), (2, 1), (1, 2), (3, 3)]

|Q|-|-|-|

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (1, 2), (0, 3)]

|Q|-|-|Q|

|-|-|Q|-|

|-|Q|-|-|

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Step number--> 2

[(0, 0), (2, 1), (1, 2), (3, 3)]

|Q|-|-|-|

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (3, 3)]

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|-|Q|-|Q|

Step number--> 4

[(0, 0), (3, 1), (1, 2), (2, 3)]

|Q|-|-|-|

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Step number--> 5

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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|-|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (2, 3)]

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|-|-|-|Q|

|Q|Q|Q|-|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (0, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 3

[(3, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 2

[(2, 0), (1, 1), (1, 2), (0, 3)]

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Step number--> 3

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (1, 2), (2, 3)]

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|-|Q|Q|-|

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Step number--> 2

[(0, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 4

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (3, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (0, 2), (1, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (2, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (2, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (1, 2), (1, 3)]

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|Q|Q|-|-|

Step number--> 2

[(0, 0), (3, 1), (1, 2), (1, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

|Q|-|-|-|

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|-|Q|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (3, 2), (1, 3)]

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|Q|Q|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (1, 3)]

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|Q|Q|Q|-|

Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (1, 3)]

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|Q|Q|Q|Q|

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Step number--> 2

[(1, 0), (1, 1), (3, 2), (1, 3)]

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Step number--> 3

[(3, 0), (1, 1), (3, 2), (1, 3)]

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Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (1, 3)]

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|Q|Q|Q|Q|

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Step number--> 2

[(1, 0), (1, 1), (3, 2), (1, 3)]

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|Q|Q|-|Q|

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|-|-|Q|-|

Step number--> 3

[(0, 0), (1, 1), (3, 2), (1, 3)]

|Q|-|-|-|

|-|Q|-|Q|

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|-|-|Q|-|

Step number--> 4

[(0, 0), (2, 1), (3, 2), (1, 3)]

|Q|-|-|-|

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|-|Q|-|-|

|-|-|Q|-|

Step number--> 5

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

|-|-|-|Q|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (1, 2), (2, 3)]

|-|Q|-|-|

|Q|-|Q|-|

|-|-|-|Q|

|-|-|-|-|

Step number--> 2

[(1, 0), (3, 1), (1, 2), (2, 3)]

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|Q|-|Q|-|

|-|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (1, 2), (0, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

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|-|Q|-|-|

Step number--> 4

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (0, 3)]

|Q|-|Q|Q|

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Step number--> 2

[(0, 0), (2, 1), (0, 2), (3, 3)]

|Q|-|Q|-|

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Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (0, 3)]

|Q|-|Q|Q|

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Step number--> 2

[(0, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 3

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 4

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (3, 2), (2, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (3, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (1, 1), (3, 2), (1, 3)]

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Step number--> 3

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (2, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 3

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|Q|-|-|

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|-|-|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (3, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (2, 3)]

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Step number--> 2

[(3, 0), (0, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (0, 3)]

|-|Q|Q|Q|

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

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|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (2, 3)]

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|-|-|Q|-|

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|Q|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

|-|Q|-|-|

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|-|-|Q|Q|

|Q|-|-|-|

Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

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|Q|-|-|-|

Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (3, 2), (0, 3)]

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|Q|-|Q|-|

Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (3, 2), (0, 3)]

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (0, 2), (2, 3)]

|Q|Q|Q|-|

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Step number--> 2

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (3, 2), (0, 3)]

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Step number--> 2

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (3, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (3, 3)]

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|Q|Q|-|Q|

Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (1, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Step number--> 3

[(3, 0), (1, 1), (2, 2), (2, 3)]

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|-|Q|-|-|

|-|-|Q|Q|

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Step number--> 4

[(3, 0), (1, 1), (0, 2), (2, 3)]

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|Q|-|-|-|

Step number--> 5

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (0, 2), (3, 3)]

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|Q|Q|-|-|

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (3, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (3, 2), (2, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (0, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (0, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (1, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 3

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (1, 3)]

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Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (0, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (0, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (1, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (2, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 3

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (1, 2), (0, 3)]

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Step number--> 2

[(3, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 3

[(2, 0), (3, 1), (1, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (1, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (1, 2), (0, 3)]

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Step number--> 3

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Step number--> 4

[(3, 0), (0, 1), (2, 2), (0, 3)]

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Step number--> 5

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 6

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (1, 3)]

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|-|Q|Q|-|

Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (2, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (2, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (2, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 3

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (2, 2), (2, 3)]

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|Q|Q|-|-|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 3

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (2, 2), (1, 3)]

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Step number--> 2

[(2, 0), (0, 1), (2, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (2, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (2, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (1, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (3, 2), (3, 3)]

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Step number--> 2

[(3, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 4

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (0, 2), (1, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (2, 2), (1, 3)]

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Step number--> 2

[(1, 0), (1, 1), (2, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (2, 2), (2, 3)]

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Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 4

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(2, 0), (0, 1), (2, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (1, 2), (0, 3)]

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Step number--> 2

[(3, 0), (2, 1), (1, 2), (3, 3)]

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Step number--> 3

[(0, 0), (2, 1), (1, 2), (3, 3)]

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Step number--> 4

[(0, 0), (2, 1), (1, 2), (1, 3)]

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Step number--> 5

[(0, 0), (2, 1), (3, 2), (1, 3)]

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|-|-|Q|-|

Step number--> 6

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (2, 3)]

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|Q|-|Q|-|

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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|Q|-|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 2

[(1, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(1, 0), (0, 1), (0, 2), (3, 3)]

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Step number--> 4

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 5

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (1, 2), (1, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (1, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (2, 2), (2, 3)]

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Step number--> 2

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (0, 3)]

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|Q|Q|Q|-|

Step number--> 2

[(2, 0), (3, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (0, 3)]

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|Q|Q|Q|-|

Step number--> 2

[(3, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 4

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (1, 2), (0, 3)]

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|Q|-|Q|-|

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (2, 2), (0, 3)]

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|Q|Q|Q|-|

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Step number--> 2

[(2, 0), (0, 1), (2, 2), (0, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (0, 2), (0, 3)]

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|Q|Q|-|-|

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Step number--> 2

[(2, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 4

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (0, 2), (3, 3)]

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Step number--> 2

[(3, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 4

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (3, 2), (0, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (0, 3)]

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (1, 3)]

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Step number--> 2

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (2, 3)]

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|Q|Q|Q|-|

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Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (2, 3)]

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|Q|Q|Q|-|

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Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (0, 3)]

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|Q|-|Q|-|

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Step number--> 2

[(1, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 3

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (1, 2), (3, 3)]

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|-|Q|Q|-|

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Step number--> 2

[(2, 0), (1, 1), (1, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (2, 2), (2, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (0, 2), (1, 3)]

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Step number--> 2

[(2, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 3

[(0, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 4

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(1, 0), (2, 1), (2, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (0, 2), (2, 3)]

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|Q|-|-|Q|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

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|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (2, 2), (0, 3)]

|Q|Q|-|Q|

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (0, 3)]

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Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (2, 2), (0, 3)]

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Step number--> 2

[(2, 0), (0, 1), (2, 2), (0, 3)]

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Step number--> 3

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (3, 3)]

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|Q|Q|Q|Q|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (3, 3)]

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|Q|Q|-|Q|

Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

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|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (0, 2), (0, 3)]

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Step number--> 2

[(2, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 4

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (1, 2), (2, 3)]

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Step number--> 2

[(2, 0), (2, 1), (1, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (1, 2), (2, 3)]

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Step number--> 2

[(2, 0), (2, 1), (1, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 4

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (1, 3)]

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|-|Q|Q|-|

Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (0, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

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|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (0, 3)]

|-|Q|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|-|-|-|

Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (0, 3)]

|-|Q|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|-|-|-|

Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (2, 2), (2, 3)]

|-|Q|-|-|

|Q|-|-|-|

|-|-|Q|Q|

|-|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

|-|Q|-|-|

|-|-|-|-|

|-|-|Q|Q|

|Q|-|-|-|

Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|-|-|Q|-|

|Q|-|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (3, 3)]

|-|-|-|-|

|Q|Q|Q|-|

|-|-|-|-|

|-|-|-|Q|

Step number--> 2

[(1, 0), (3, 1), (1, 2), (3, 3)]

|-|-|-|-|

|Q|-|Q|-|

|-|-|-|-|

|-|Q|-|Q|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|Q|-|-|

|-|-|-|-|

|-|-|-|Q|

Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|Q|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (3, 2), (0, 3)]

|-|-|-|Q|

|-|Q|-|-|

|Q|-|-|-|

|-|-|Q|-|

Step number--> 2

[(2, 0), (0, 1), (3, 2), (0, 3)]

|-|Q|-|Q|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (1, 2), (1, 3)]

|Q|-|-|-|

|-|-|Q|Q|

|-|-|-|-|

|-|Q|-|-|

Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

|Q|-|-|-|

|-|-|Q|-|

|-|-|-|Q|

|-|Q|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (3, 2), (3, 3)]

|-|-|-|-|

|-|-|-|-|

|-|Q|-|-|

|Q|-|Q|Q|

Step number--> 2

[(3, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|Q|-|-|

|Q|-|-|Q|

Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Step number--> 4

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (1, 2), (1, 3)]

|-|-|-|-|

|-|-|Q|Q|

|Q|Q|-|-|

|-|-|-|-|

Step number--> 2

[(2, 0), (2, 1), (3, 2), (1, 3)]

|-|-|-|-|

|-|-|-|Q|

|Q|Q|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (1, 2), (1, 3)]

|-|-|-|-|

|-|-|Q|Q|

|Q|Q|-|-|

|-|-|-|-|

Step number--> 2

[(2, 0), (2, 1), (3, 2), (1, 3)]

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|-|-|-|Q|

|Q|Q|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (2, 2), (3, 3)]

|Q|-|-|-|

|-|Q|-|-|

|-|-|Q|-|

|-|-|-|Q|

Step number--> 2

[(0, 0), (2, 1), (2, 2), (3, 3)]

|Q|-|-|-|

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|-|Q|Q|-|

|-|-|-|Q|

Step number--> 3

[(0, 0), (2, 1), (1, 2), (3, 3)]

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

|-|-|-|Q|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (0, 3)]

|-|Q|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|-|-|-|

Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (1, 3)]

|-|-|-|-|

|-|-|-|Q|

|-|-|-|-|

|Q|Q|Q|-|

Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (1, 2), (1, 3)]

|-|Q|-|-|

|Q|-|Q|Q|

|-|-|-|-|

|-|-|-|-|

Step number--> 2

[(2, 0), (0, 1), (1, 2), (1, 3)]

|-|Q|-|-|

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (0, 2), (3, 3)]

|Q|-|Q|-|

|-|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (1, 2), (3, 3)]

|Q|-|-|-|

|-|Q|Q|-|

|-|-|-|-|

|-|-|-|Q|

Step number--> 2

[(0, 0), (2, 1), (1, 2), (3, 3)]

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

|-|-|-|Q|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (1, 2), (3, 3)]

|Q|-|-|-|

|-|Q|Q|-|

|-|-|-|-|

|-|-|-|Q|

Step number--> 2

[(0, 0), (2, 1), (1, 2), (3, 3)]

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

|-|-|-|Q|

Step number--> 3

[(0, 0), (2, 1), (1, 2), (1, 3)]

|Q|-|-|-|

|-|-|Q|Q|

|-|Q|-|-|

|-|-|-|-|

Step number--> 4

[(0, 0), (2, 1), (3, 2), (1, 3)]

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

|-|-|Q|-|

Step number--> 5

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (1, 2), (3, 3)]

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|-|-|Q|-|

|Q|Q|-|-|

|-|-|-|Q|

Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

|-|Q|-|-|

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (1, 2), (0, 3)]

|-|-|-|Q|

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (1, 2), (1, 3)]

|-|Q|-|-|

|-|-|Q|Q|

|-|-|-|-|

|Q|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (1, 2), (0, 3)]

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|-|-|Q|-|

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|Q|Q|-|-|

Step number--> 2

[(2, 0), (3, 1), (1, 2), (0, 3)]

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|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

Step number--> 3

[(2, 0), (3, 1), (1, 2), (3, 3)]

|-|-|-|-|

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|Q|

Step number--> 4

[(2, 0), (0, 1), (1, 2), (3, 3)]

|-|Q|-|-|

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

Step number--> 5

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (2, 3)]

|-|-|-|-|

|Q|-|Q|-|

|-|Q|-|Q|

|-|-|-|-|

Step number--> 2

[(1, 0), (3, 1), (1, 2), (2, 3)]

|-|-|-|-|

|Q|-|Q|-|

|-|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (2, 3)]

|-|-|-|-|

|Q|-|Q|-|

|-|Q|-|Q|

|-|-|-|-|

Step number--> 2

[(1, 0), (2, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|Q|

|-|-|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

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|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (2, 3)]

|-|Q|Q|-|

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|Q|-|-|Q|

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Step number--> 2

[(2, 0), (0, 1), (0, 2), (3, 3)]

|-|Q|Q|-|

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|Q|-|-|-|

|-|-|-|Q|

Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (3, 3)]

|-|-|-|-|

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|Q|Q|Q|Q|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (3, 3)]

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|-|-|-|-|

|Q|Q|-|Q|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (3, 2), (3, 3)]

|-|-|-|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|Q|Q|

Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (3, 2), (3, 3)]

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|Q|-|-|-|

|-|Q|-|-|

|-|-|Q|Q|

Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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|-|-|-|Q|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (3, 2), (3, 3)]

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|-|-|-|-|

|-|Q|-|-|

|Q|-|Q|Q|

Step number--> 2

[(3, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

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|-|Q|-|-|

|Q|-|-|Q|

Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|Q|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (2, 2), (2, 3)]

|-|-|-|-|

|-|Q|-|-|

|Q|-|Q|Q|

|-|-|-|-|

Step number--> 2

[(3, 0), (1, 1), (2, 2), (2, 3)]

|-|-|-|-|

|-|Q|-|-|

|-|-|Q|Q|

|Q|-|-|-|

Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

Step number--> 4

[(3, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|-|-|-|-|

|Q|-|Q|-|

|-|Q|-|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|-|-|-|-|

|Q|-|Q|-|

|-|Q|-|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (1, 2), (2, 3)]

|-|-|-|-|

|-|Q|Q|-|

|-|-|-|Q|

|Q|-|-|-|

Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (3, 2), (2, 3)]

|Q|-|-|-|

|-|-|-|-|

|-|-|-|Q|

|-|Q|Q|-|

Step number--> 2

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (1, 2), (3, 3)]

|-|-|-|-|

|-|Q|Q|-|

|Q|-|-|-|

|-|-|-|Q|

Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

|-|Q|-|-|

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (3, 2), (2, 3)]

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (2, 2), (2, 3)]

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Step number--> 2

[(1, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (2, 2), (3, 3)]

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Step number--> 4

[(2, 0), (0, 1), (3, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (1, 2), (0, 3)]

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Step number--> 2

[(0, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (1, 2), (0, 3)]

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Step number--> 2

[(0, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 3

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Step number--> 4

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (1, 2), (2, 3)]

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Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (0, 2), (3, 3)]

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (0, 2), (1, 3)]

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Step number--> 2

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (1, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (1, 2), (2, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 3

[(0, 0), (3, 1), (0, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (3, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (1, 3)]

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Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (3, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (3, 2), (0, 3)]

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|Q|-|Q|-|

Step number--> 3

[(2, 0), (1, 1), (3, 2), (0, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (0, 3)]

|Q|-|-|Q|

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Step number--> 2

[(0, 0), (2, 1), (3, 2), (0, 3)]

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Step number--> 3

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (2, 3)]

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Step number--> 2

[(3, 0), (0, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (3, 3)]

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|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (3, 3)]

|-|Q|Q|-|

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Step number--> 2

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (0, 3)]

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Step number--> 2

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (2, 2), (0, 3)]

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|-|Q|Q|-|

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Step number--> 2

[(3, 0), (1, 1), (2, 2), (0, 3)]

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Step number--> 3

[(3, 0), (1, 1), (2, 2), (2, 3)]

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Step number--> 4

[(3, 0), (1, 1), (0, 2), (2, 3)]

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|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

Step number--> 5

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|-|-|-|Q|

|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

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|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (1, 3)]

|-|Q|Q|-|

|-|-|-|Q|

|Q|-|-|-|

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (0, 3)]

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Step number--> 2

[(1, 0), (3, 1), (3, 2), (0, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (3, 3)]

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|Q|-|Q|-|

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (1, 2), (3, 3)]

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Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

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Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (0, 2), (0, 3)]

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Step number--> 2

[(2, 0), (0, 1), (3, 2), (0, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (1, 2), (0, 3)]

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Step number--> 2

[(0, 0), (3, 1), (1, 2), (0, 3)]

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Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

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Step number--> 4

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (3, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (3, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 2

[(3, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (2, 3)]

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\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (1, 2), (1, 3)]

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Step number--> 2

[(0, 0), (2, 1), (1, 2), (1, 3)]

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Step number--> 3

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (1, 2), (1, 3)]

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Step number--> 2

[(3, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 3

[(0, 0), (2, 1), (0, 2), (1, 3)]

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Step number--> 4

[(0, 0), (2, 1), (3, 2), (1, 3)]

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Step number--> 5

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

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|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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|Q|-|-|-|

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RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (3, 2), (2, 3)]

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|Q|Q|-|Q|

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Step number--> 2

[(2, 0), (2, 1), (3, 2), (1, 3)]

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|Q|Q|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

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RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (2, 2), (2, 3)]

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Step number--> 2

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Step number--> 3

[(3, 0), (3, 1), (0, 2), (2, 3)]

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|Q|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

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HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (1, 2), (3, 3)]

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|-|Q|Q|-|

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Step number--> 2

[(3, 0), (1, 1), (1, 2), (2, 3)]

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Step number--> 3

[(3, 0), (1, 1), (0, 2), (2, 3)]

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Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (1, 1), (1, 2), (3, 3)]

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Step number--> 2

[(3, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 3

[(2, 0), (0, 1), (1, 2), (3, 3)]

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Step number--> 4

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

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|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (3, 2), (0, 3)]

|-|-|-|Q|

|-|-|-|-|

|Q|Q|-|-|

|-|-|Q|-|

Step number--> 2

[(2, 0), (0, 1), (3, 2), (0, 3)]

|-|Q|-|Q|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (1, 3)]

|-|-|-|-|

|Q|Q|Q|Q|

|-|-|-|-|

|-|-|-|-|

Step number--> 2

[(1, 0), (1, 1), (1, 2), (0, 3)]

|-|-|-|Q|

|Q|Q|Q|-|

|-|-|-|-|

|-|-|-|-|

Step number--> 3

[(1, 0), (1, 1), (3, 2), (0, 3)]

|-|-|-|Q|

|Q|Q|-|-|

|-|-|-|-|

|-|-|Q|-|

Step number--> 4

[(2, 0), (1, 1), (3, 2), (0, 3)]

|-|-|-|Q|

|-|Q|-|-|

|Q|-|-|-|

|-|-|Q|-|

Step number--> 5

[(2, 0), (0, 1), (3, 2), (0, 3)]

|-|Q|-|Q|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|Q|-|-|

|Q|-|-|Q|

Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|Q|-|-|

|Q|-|-|Q|

Step number--> 2

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(3, 0), (0, 1), (2, 2), (0, 3)]

|-|Q|-|Q|

|-|-|-|-|

|-|-|Q|-|

|Q|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|-|-|Q|-|

|Q|-|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (3, 3)]

|-|-|-|-|

|Q|Q|Q|-|

|-|-|-|-|

|-|-|-|Q|

Step number--> 2

[(1, 0), (3, 1), (1, 2), (3, 3)]

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|Q|-|Q|-|

|-|-|-|-|

|-|Q|-|Q|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (2, 2), (3, 3)]

|-|Q|-|-|

|Q|-|-|-|

|-|-|Q|-|

|-|-|-|Q|

Step number--> 2

[(1, 0), (0, 1), (0, 2), (3, 3)]

|-|Q|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|-|-|Q|

Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Step number--> 4

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (2, 2), (2, 3)]

|Q|-|-|-|

|-|-|-|-|

|-|-|Q|Q|

|-|Q|-|-|

Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

|Q|-|-|-|

|-|-|Q|-|

|-|-|-|Q|

|-|Q|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (2, 2), (2, 3)]

|Q|-|-|-|

|-|-|-|-|

|-|-|Q|Q|

|-|Q|-|-|

Step number--> 2

[(0, 0), (3, 1), (1, 2), (2, 3)]

|Q|-|-|-|

|-|-|Q|-|

|-|-|-|Q|

|-|Q|-|-|

Step number--> 3

[(0, 0), (3, 1), (0, 2), (2, 3)]

|Q|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (3, 2), (1, 3)]

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

|-|-|Q|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (3, 1), (2, 2), (0, 3)]

|Q|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (2, 3)]

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (2, 3)]

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|Q|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (2, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|Q|

|-|-|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (2, 2), (3, 3)]

|-|-|-|-|

|Q|Q|-|-|

|-|-|Q|-|

|-|-|-|Q|

Step number--> 2

[(1, 0), (1, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|Q|-|-|

|-|-|Q|-|

|-|-|-|-|

Step number--> 3

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Step number--> 4

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (0, 3)]

|Q|-|-|Q|

|-|-|-|-|

|-|Q|Q|-|

|-|-|-|-|

Step number--> 2

[(0, 0), (3, 1), (2, 2), (0, 3)]

|Q|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Step number--> 3

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (2, 2), (0, 3)]

|Q|-|-|Q|

|-|-|-|-|

|-|Q|Q|-|

|-|-|-|-|

Step number--> 2

[(0, 0), (2, 1), (3, 2), (0, 3)]

|Q|-|-|Q|

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|-|Q|-|-|

|-|-|Q|-|

Step number--> 3

[(0, 0), (2, 1), (3, 2), (1, 3)]

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

|-|-|Q|-|

Step number--> 4

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (0, 2), (1, 3)]

|-|-|Q|-|

|Q|Q|-|Q|

|-|-|-|-|

|-|-|-|-|

Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (0, 2), (1, 3)]

|-|Q|Q|-|

|Q|-|-|Q|

|-|-|-|-|

|-|-|-|-|

Step number--> 2

[(1, 0), (0, 1), (0, 2), (3, 3)]

|-|Q|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|-|-|Q|

Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Step number--> 4

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

|Q|Q|-|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

|Q|Q|-|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(2, 0), (1, 1), (1, 2), (0, 3)]

|-|-|-|Q|

|-|Q|Q|-|

|Q|-|-|-|

|-|-|-|-|

Step number--> 2

[(2, 0), (1, 1), (3, 2), (0, 3)]

|-|-|-|Q|

|-|Q|-|-|

|Q|-|-|-|

|-|-|Q|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (0, 1), (2, 2), (2, 3)]

|-|Q|-|-|

|-|-|-|-|

|Q|-|Q|Q|

|-|-|-|-|

Step number--> 2

[(2, 0), (0, 1), (2, 2), (3, 3)]

|-|Q|-|-|

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|Q|-|Q|-|

|-|-|-|Q|

Step number--> 3

[(2, 0), (0, 1), (3, 2), (3, 3)]

|-|Q|-|-|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|Q|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (3, 2), (3, 3)]

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|-|

|-|-|Q|Q|

Step number--> 2

[(0, 0), (1, 1), (3, 2), (0, 3)]

|Q|-|-|Q|

|-|Q|-|-|

|-|-|-|-|

|-|-|Q|-|

Step number--> 3

[(2, 0), (1, 1), (3, 2), (0, 3)]

|-|-|-|Q|

|-|Q|-|-|

|Q|-|-|-|

|-|-|Q|-|

Step number--> 4

[(2, 0), (0, 1), (3, 2), (0, 3)]

|-|Q|-|Q|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (3, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|Q|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (3, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|Q|-|

Step number--> 2

[(1, 0), (3, 1), (0, 2), (0, 3)]

|-|-|Q|Q|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(1, 0), (1, 1), (1, 2), (2, 3)]

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|Q|Q|Q|-|

|-|-|-|Q|

|-|-|-|-|

Step number--> 2

[(1, 0), (1, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (1, 2), (1, 3)]

|Q|Q|-|-|

|-|-|Q|Q|

|-|-|-|-|

|-|-|-|-|

Step number--> 2

[(0, 0), (0, 1), (3, 2), (1, 3)]

|Q|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

HILL CLIMBING SEARCH

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (2, 2), (2, 3)]

|Q|Q|-|-|

|-|-|-|-|

|-|-|Q|Q|

|-|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

|-|Q|-|-|

|-|-|-|-|

|-|-|Q|Q|

|Q|-|-|-|

Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|-|-|Q|-|

|Q|-|-|-|

Search procedure Failed

HILL CLIMBING WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(0, 0), (0, 1), (2, 2), (2, 3)]

|Q|Q|-|-|

|-|-|-|-|

|-|-|Q|Q|

|-|-|-|-|

Step number--> 2

[(3, 0), (0, 1), (2, 2), (2, 3)]

|-|Q|-|-|

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|-|-|Q|Q|

|Q|-|-|-|

Step number--> 3

[(3, 0), (0, 1), (2, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

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|Q|-|-|-|

Step number--> 4

[(3, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|-|-|-|-|

|Q|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART HILLCLIMBING

\*\*\*Initial representation\*\*\*

[(0, 0), (2, 1), (3, 2), (0, 3)]

|Q|-|-|Q|

|-|-|-|-|

|-|Q|-|-|

|-|-|Q|-|

Step number--> 2

[(0, 0), (2, 1), (3, 2), (1, 3)]

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

|-|-|Q|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(0, 0), (1, 1), (1, 2), (3, 3)]

|Q|-|-|-|

|-|Q|Q|-|

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|-|-|-|Q|

Step number--> 2

[(0, 0), (3, 1), (1, 2), (3, 3)]

|Q|-|-|-|

|-|-|Q|-|

|-|-|-|-|

|-|Q|-|Q|

Step number--> 3

[(0, 0), (3, 1), (1, 2), (2, 3)]

|Q|-|-|-|

|-|-|Q|-|

|-|-|-|Q|

|-|Q|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (3, 1), (2, 2), (1, 3)]

|-|-|-|-|

|Q|-|-|Q|

|-|-|Q|-|

|-|Q|-|-|

Step number--> 2

[(1, 0), (3, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(1, 0), (0, 1), (1, 2), (3, 3)]

|-|Q|-|-|

|Q|-|Q|-|

|-|-|-|-|

|-|-|-|Q|

Step number--> 2

[(2, 0), (0, 1), (1, 2), (3, 3)]

|-|Q|-|-|

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|-|-|-|Q|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(3, 0), (2, 1), (1, 2), (3, 3)]

|-|-|-|-|

|-|-|Q|-|

|-|Q|-|-|

|Q|-|-|Q|

Step number--> 2

[(3, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

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|-|Q|-|-|

|Q|-|-|Q|

Step number--> 3

[(1, 0), (2, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|Q|-|-|

|-|-|-|Q|

Search procedure Failed

\*\*\*Initial representation\*\*\*

[(2, 0), (2, 1), (2, 2), (0, 3)]

|-|-|-|Q|

|-|-|-|-|

|Q|Q|Q|-|

|-|-|-|-|

Step number--> 2

[(2, 0), (0, 1), (2, 2), (0, 3)]

|-|Q|-|Q|

|-|-|-|-|

|Q|-|Q|-|

|-|-|-|-|

Step number--> 3

[(2, 0), (0, 1), (3, 2), (0, 3)]

|-|Q|-|Q|

|-|-|-|-|

|Q|-|-|-|

|-|-|Q|-|

\*\*\*Success achieved\*\*\*

[(2, 0), (0, 1), (3, 2), (1, 3)]

|-|Q|-|-|

|-|-|-|Q|

|Q|-|-|-|

|-|-|Q|-|

RANDOM RESTART WITH SIDEWAYS

\*\*\*Initial representation\*\*\*

[(3, 0), (3, 1), (3, 2), (3, 3)]

|-|-|-|-|

|-|-|-|-|

|-|-|-|-|

|Q|Q|Q|Q|

Step number--> 2

[(3, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|-|-|-|-|

|-|-|-|-|

|Q|Q|-|Q|

Step number--> 3

[(1, 0), (3, 1), (0, 2), (3, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|-|

|-|Q|-|Q|

\*\*\*Success achieved\*\*\*

[(1, 0), (3, 1), (0, 2), (2, 3)]

|-|-|Q|-|

|Q|-|-|-|

|-|-|-|Q|

|-|Q|-|-|

HILL CLIMBING SEARCH

====================

VALUE OF N: 4 (i.e 4 x 4 )

TOTAL NUMBER OF RUNS: 100

SUCCESS RUNS: 37

SUCCESS RATES: 37.0 %

SUCCESS AVERAGE STEPS: 2.78

NUMBER\_OF\_FAILURE RUNS: 63

FAILURE RATE: 63.0 %

FAILURE AVERAGE STEPS: 2.16

FLAT LOCAL MINIMA: 63

HILL CLIMBING WITH SIDEWAYS

===========================

VALUE OF N: 4 (i.e 4 x 4 )

TOTAL NUMBER OF RUNS: 100

SUCCESS RUNS: 100

SUCCESS RATES: 100.0 %

SUCCESS AVERAGE STEPS: 3.84

NUMBER\_OF\_FAILURE RUNS: 0

FAILURE RATE: - %

FAILURE AVERAGE STEPS: -

FLAT LOCAL MINIMA: 0

RANDOM RESTART HILLCLIMBING

---------------------------

n is 4 (i.e 4 x\_coord 4 )

TOTAL NUMBER OF RUNS: 100

AVERAGE NUMBER OF RESTARTS: 2.04

AVERAGE NUMBER OF STEPS OF LAST RESTART 2.81

AVERAGE NUMBER OF STEPS OF ALL RESTARTS 5.19

RANDOM RESTART WITH SIDEWAYS

----------------------------

n is 4 (i.e 4 x\_coord 4 )

TOTAL NUMBER OF RUNS: 100

AVERAGE NUMBER OF RESTARTS: 1.0

AVERAGE NUMBER OF STEPS OF LAST RESTART 3.94

AVERAGE NUMBER OF STEPS OF ALL RESTARTS 3.94