Program to solve the 8, 15, 24, or 36 Puzzle...

Specify the puzzle size (8, 15, 24, or 35; 0 to exit):

8

Number of shuffle moves desired? (press ENTER alone to specify starting board)

5

Show intermediate board positions? (Y/N: Default=N)

N

Search mode (1=breadth-first (default); 2=best-first):

1

Goal

1 2 3

4 5 6

7 8

(Raw score = 0 Depth = 0 Total score = 0)

Start state (5 shuffle moves actually made)

Starting Board

1 2 3

5 6

4 7 8

(Raw score = 3 Depth = 0 Total score = 0)

Working...

Time at depth 0 = 0 second(s) (Nodes in OPEN=3; CLOSED=1

Time at depth 1 = 0 second(s) (Nodes in OPEN=5; CLOSED=4

Time at depth 2 = 0 second(s) (Nodes in OPEN=10; CLOSED=9

Success! Press ENTER to show all boards; S and ENTER to step through:

1 2 3

5 6

4 7 8

(Raw score = 3 Depth = 0 Total score = 0)

1 2 3

4 5 6

7 8

(Raw score = 2 Depth = 1 Total score = 3)

1 2 3

4 5 6

7 8

(Raw score = 1 Depth = 2 Total score = 8)

1 2 3

4 5 6

7 8

(Raw score = 0 Depth = 3 Total score = 18)

3 moves out of 18 moves considered (13 nodes left in OPEN)

(Note: Total score for breadth-first search = # of moves considered)

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Specify the puzzle size (8, 15, 24, or 35; 0 to exit):

8

Number of shuffle moves desired? (press ENTER alone to specify starting board)

20

Show intermediate board positions? (Y/N: Default=N)

N

Search mode (1=breadth-first (default); 2=best-first):

2

Include depth in heuristic evaluation? (Y/N):

y

Goal

1 2 3

4 5 6

7 8

(Raw score = 0 Depth = 0 Total score = 0)

Start state (20 shuffle moves actually made)

Starting Board

3 5 6

1 4 2

8 7

(Raw score = 10 Depth = 0 Total score = 10)

Working...

Success! Press ENTER to show all boards; S and ENTER to step through:

3 5 6

1 4 2

8 7

(Raw score = 10 Depth = 0 Total score = 10)

3 5 6

1 4 2

8 7

(Raw score = 11 Depth = 1 Total score = 12)

3 5 6

1 2

8 4 7

(Raw score = 12 Depth = 2 Total score = 14)

3 5 6

1 2

8 4 7

(Raw score = 11 Depth = 3 Total score = 14)

3 5

1 2 6

8 4 7

(Raw score = 10 Depth = 4 Total score = 14)

3 5

1 2 6

8 4 7

(Raw score = 11 Depth = 5 Total score = 16)

3 5

1 2 6

8 4 7

(Raw score = 10 Depth = 6 Total score = 16)

1 3 5

2 6

8 4 7

(Raw score = 9 Depth = 7 Total score = 16)

1 3 5

8 2 6

4 7

(Raw score = 10 Depth = 8 Total score = 18)

1 3 5

8 2 6

4 7

(Raw score = 9 Depth = 9 Total score = 18)

1 3 5

8 2 6

4 7

(Raw score = 8 Depth = 10 Total score = 18)

1 3 5

8 2

4 7 6

(Raw score = 9 Depth = 11 Total score = 20)

1 3

8 2 5

4 7 6

(Raw score = 8 Depth = 12 Total score = 20)

1 3

8 2 5

4 7 6

(Raw score = 7 Depth = 13 Total score = 20)

1 2 3

8 5

4 7 6

(Raw score = 6 Depth = 14 Total score = 20)

1 2 3

8 5

4 7 6

(Raw score = 5 Depth = 15 Total score = 20)

1 2 3

4 8 5

7 6

(Raw score = 4 Depth = 16 Total score = 20)

1 2 3

4 8 5

7 6

(Raw score = 3 Depth = 17 Total score = 20)

1 2 3

4 5

7 8 6

(Raw score = 2 Depth = 18 Total score = 20)

1 2 3

4 5

7 8 6

(Raw score = 1 Depth = 19 Total score = 20)

1 2 3

4 5 6

7 8

(Raw score = 0 Depth = 20 Total score = 20)

20 moves out of 311 moves considered (184 nodes left in OPEN)

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Specify the puzzle size (8, 15, 24, or 35; 0 to exit):