

# Solutions to \*puzzle-0\* and \*puzzle-1\*

Found via A\* with Manhattan Distance and Linear Conflict

## \*puzzle-0\*

Step 6:

[0, 1, 2]

[3, 4, 5]

[6, 7, 8]

Action: (CartesianIndex(1, 1), "DOWN")

Step 5:

[3, 1, 2]

[0, 4, 5]

[6, 7, 8]

Action: (CartesianIndex(2, 1), "RIGHT")

Step 4:

[3, 1, 2]

[4, 0, 5]

[6, 7, 8]

Action: (CartesianIndex(2, 2), "DOWN")

Step 3:

[3, 1, 2]

[4, 7, 5]

[6, 0, 8]

Action: (CartesianIndex(3, 2), "LEFT")

Step 2:

[3, 1, 2]

[4, 7, 5]

[0, 6, 8]

Action: (CartesianIndex(3, 1), "UP")

Step 1:

[3, 1, 2]

[0, 7, 5]

[4, 6, 8]

Action: (CartesianIndex(2, 1), "RIGHT")

Step 0:

[3, 1, 2]

[7, 0, 5]

[4, 6, 8]

Action: nothing

## \*puzzle-1\*

Step 26:

[0, 1, 2]

[3, 4, 5]

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[6, 7, 8]
Action: (CartesianIndex(1, 1), "RIGHT")
Step 25:
[1, 0, 2]
[3, 4, 5]
[6, 7, 8]
Action: (CartesianIndex(1, 2), "RIGHT")
Step 24:
[1, 2, 0]
[3, 4, 5]
[6, 7, 8]
Action: (CartesianIndex(1, 3), "DOWN")
Step 23:
[1, 2, 5]
[3, 4, 0]
[6, 7, 8]
Action: (CartesianIndex(2, 3), "LEFT")
Step 22:
[1, 2, 5]
[3, 0, 4]
[6, 7, 8]
Action: (CartesianIndex(2, 2), "LEFT")
Step 21:
[1, 2, 5]
[0, 3, 4]
[6, 7, 8]
Action: (CartesianIndex(2, 1), "UP")
Step 20:
[0, 2, 5]
[1, 3, 4]
[6, 7, 8]
Action: (CartesianIndex(1, 1), "RIGHT")
Step 19:
[2, 0, 5]
[1, 3, 4]
[6, 7, 8]
Action: (CartesianIndex(1, 2), "RIGHT")
Step 18:
[2, 5, 0]
[1, 3, 4]
[6, 7, 8]
Action: (CartesianIndex(1, 3), "DOWN")
Step 17:
[2, 5, 4]
[1, 3, 0]
[6, 7, 8]
Action: (CartesianIndex(2, 3), "LEFT")
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Step 16:

[2, 5, 4]

[1, 0, 3]

[6, 7, 8]

Action: (CartesianIndex(2, 2), "LEFT")

Step 15:

[2, 5, 4]

[0, 1, 3]

[6, 7, 8]

Action: (CartesianIndex(2, 1), "DOWN")

Step 14:

[2, 5, 4]

[6, 1, 3]

[0, 7, 8]

Action: (CartesianIndex(3, 1), "RIGHT")

Step 13:

[2, 5, 4]

[6, 1, 3]

[7, 0, 8]

Action: (CartesianIndex(3, 2), "RIGHT")

Step 12:

[2, 5, 4]

[6, 1, 3]

[7, 8, 0]

Action: (CartesianIndex(3, 3), "UP")

Step 11:

[2, 5, 4]

[6, 1, 0]

[7, 8, 3]

Action: (CartesianIndex(2, 3), "LEFT")

Step 10:

[2, 5, 4]

[6, 0, 1]

[7, 8, 3]

Action: (CartesianIndex(2, 2), "LEFT")

Step 9:

[2, 5, 4]

[0, 6, 1]

[7, 8, 3]

Action: (CartesianIndex(2, 1), "DOWN")

Step 8:

[2, 5, 4]

[7, 6, 1]

[0, 8, 3]

Action: (CartesianIndex(3, 1), "RIGHT")

Step 7:

[2, 5, 4]

[7, 6, 1]

[8, 0, 3]

Action: (CartesianIndex(3, 2), "RIGHT")

Step 6:

[2, 5, 4]

[7, 6, 1]

[8, 3, 0]

Action: (CartesianIndex(3, 3), "UP")

Step 5:

[2, 5, 4]

[7, 6, 0]

[8, 3, 1]

Action: (CartesianIndex(2, 3), "LEFT")

Step 4:

[2, 5, 4]

[7, 0, 6]

[8, 3, 1]

Action: (CartesianIndex(2, 2), "UP")

Step 3:

[2, 0, 4]

[7, 5, 6]

[8, 3, 1]

Action: (CartesianIndex(1, 2), "LEFT")

Step 2:

[0, 2, 4]

[7, 5, 6]

[8, 3, 1]

Action: (CartesianIndex(1, 1), "DOWN")

Step 1:

[7, 2, 4]

[0, 5, 6]

[8, 3, 1]

Action: (CartesianIndex(2, 1), "RIGHT")

Step 0:

[7, 2, 4]

[5, 0, 6]

[8, 3, 1]

Action: nothing