# Java output for A\*Search:

A\*Search from start to goal on:

Grid1

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@378fd1ac], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6e2c634b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7e6cbb7a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@378fd1ac], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7e6cbb7a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6e2c634b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7106e68e], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7e6cbb7a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@378fd1ac], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4], gValue=5]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@300ffa5d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=4]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@378fd1ac], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4d405ef7], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6e2c634b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=6]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@378fd1ac], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7e6cbb7a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@378fd1ac], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4], gValue=5]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6e2c634b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7e6cbb7a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@378fd1ac], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4], gValue=5]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7e6cbb7a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7106e68e], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7e6cbb7a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@378fd1ac], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4], gValue=5], gValue=6]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6e2c634b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@300ffa5d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=4], gValue=5]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7106e68e], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4d405ef7], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6e2c634b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=6], gValue=7]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@1a6c5a9e], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@300ffa5d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6e2c634b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=6]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4d405ef7], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7106e68e], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7e6cbb7a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@378fd1ac], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4], gValue=5], gValue=8]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@300ffa5d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=6]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@300ffa5d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=4], gValue=5]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6e2c634b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4d405ef7], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6e2c634b], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5e9f23b4], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@50040f0c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=6], gValue=7]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@1a6c5a9e], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5d099f62], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@1a6c5a9e], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=9]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5d099f62], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=9]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@49c2faae], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@49c2faae], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7], gValue=8]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@31cefde0], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@49c2faae], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7], gValue=8]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@1d56ce6a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@31cefde0], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@49c2faae], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7], gValue=8], gValue=9]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@17f052a3], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@1d56ce6a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@31cefde0], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@49c2faae], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7], gValue=8], gValue=9], gValue=10]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5010be6], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@17f052a3], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@1d56ce6a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@31cefde0], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@49c2faae], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@179d3b25], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@433c675d], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2e817b38], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6576fe71], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7cca494b], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7], gValue=8], gValue=9], gValue=10], gValue=11]

Goal node: Node [value=uk.ac.hw.macs.search.GridState@5010be6]

Cost: 11

Nodes expanded: 19

Path to root:

- node: uk.ac.hw.macs.search.GridState@5010be6

- node: uk.ac.hw.macs.search.GridState@17f052a3

- node: uk.ac.hw.macs.search.GridState@1d56ce6a

- node: uk.ac.hw.macs.search.GridState@31cefde0

- node: uk.ac.hw.macs.search.GridState@49c2faae

- node: uk.ac.hw.macs.search.GridState@179d3b25

- node: uk.ac.hw.macs.search.GridState@433c675d

- node: uk.ac.hw.macs.search.GridState@2e817b38

- node: uk.ac.hw.macs.search.GridState@6576fe71

- node: uk.ac.hw.macs.search.GridState@7cca494b

A\*Search from start to goal on:

Grid2

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@69663380], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1], gValue=2]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4459eb14], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@69663380], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1], gValue=2], gValue=3]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@28c97a5], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4459eb14], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@69663380], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d5380c2], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=3]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1], gValue=2]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@69663380], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1], gValue=2], gValue=3]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@69663380], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4459eb14], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@69663380], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2328c243], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@28c97a5], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4459eb14], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@69663380], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4], gValue=7]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4459eb14], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@28c97a5], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4459eb14], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@69663380], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4], gValue=5]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7a4f0f29], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d5380c2], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=3], gValue=4]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2077d4de], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2328c243], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@28c97a5], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4459eb14], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@69663380], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@443b7951], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=1], gValue=2], gValue=3], gValue=4], gValue=7], gValue=8]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@77a567e1], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7a4f0f29], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d5380c2], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=3], gValue=4], gValue=5]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d21714c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@77a567e1], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7a4f0f29], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d5380c2], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4ccabbaa], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d21714c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@77a567e1], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7a4f0f29], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d5380c2], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2d38eb89], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4ccabbaa], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d21714c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@77a567e1], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7a4f0f29], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d5380c2], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7], gValue=8]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4629104a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2d38eb89], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4ccabbaa], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d21714c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@77a567e1], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7a4f0f29], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d5380c2], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7], gValue=8], gValue=9]

Current node: FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4d76f3f8], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4629104a], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@2d38eb89], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@4ccabbaa], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d21714c], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@77a567e1], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@7a4f0f29], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@6d5380c2], parent=FringeNode [node=Node [value=uk.ac.hw.macs.search.GridState@5ef04b5], parent=null, gValue=0], gValue=3], gValue=4], gValue=5], gValue=6], gValue=7], gValue=8], gValue=9], gValue=10]

Goal node: Node [value=uk.ac.hw.macs.search.GridState@4d76f3f8]

Cost: 10

Nodes expanded: 14

Path to root:

- node: uk.ac.hw.macs.search.GridState@4d76f3f8

- node: uk.ac.hw.macs.search.GridState@4629104a

- node: uk.ac.hw.macs.search.GridState@2d38eb89

- node: uk.ac.hw.macs.search.GridState@4ccabbaa

- node: uk.ac.hw.macs.search.GridState@6d21714c

- node: uk.ac.hw.macs.search.GridState@77a567e1

- node: uk.ac.hw.macs.search.GridState@7a4f0f29

- node: uk.ac.hw.macs.search.GridState@6d5380c2

- node: uk.ac.hw.macs.search.GridState@5ef04b5