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For the search graph shown in Fig. 2.7, add an edge with cost 1 between nodes (0,1) and (1,1), find the shortest path between the initial node (0,0) and the target node (2,2) using A* algorithm.

Steps	Open list	Closed list
0	{(0,0), 4}	- -
1	{(0,1), 5} {(1,0), 8}	{(0,0),4}
2	{(1,1), 5} {(0,2), 6} {(1,0), 8}	{(0,0),4} {(0,1), 5}
3	{(1,2), 5} {(0,2),6} {(2,1),7} {(1,0), 8}	{(0,0),4} {(0,1), 5} {(1,1), 5}
4	{(0,2),6} {(2,1),7} {(1,0), 8}	{(0,0),4} {(0,1), 5} {(1,1), 5} {(1,2),5}
5	{(2,1),7} {(1,0), 8}	{(0,0),4} {(0,1), 5} {(1,1), 5} {(1,2),5} {(0,2),6}
6	{(2,2),7}(target node) {(1,0),8}	{(0,0),4} {(0,1), 5} {(1,1), 5} {(1,2),5} {(0,2),6} {(2,1),7}
7	(2,2) = target node	{(0,0),4} {(0,1), 5} {(1,1), 5} {(1,2),5} {(0,2),6} {(2,1),7}

Therefore the solution founded by A* algorithm is
(0,0) -> (0,1) -> ((1,1) -> (2,1) -> (2,2)