Solving Air Cargo Problem 3 using breadth_first_search...

| # Actions | Expansions | Goal Tests | New Nodes |
|---|---|---|---|
| 88 | 14663 | 18098 | 129625 |

Plan length: 12  Time elapsed in seconds: 5.534140376
Load(C1, P1, SFO)
Load(C2, P2, JFK)
Fly(P2, JFK, ORD)
Load(C4, P2, ORD)
Fly(P1, SFO, ATL)
Load(C3, P1, ATL)
Fly(P1, ATL, JFK)
Unload(C1, P1, JFK)
Unload(C3, P1, JFK)
Fly(P2, ORD, SFO)
Unload(C2, P2, SFO)
Unload(C4, P2, SFO)


Solving Air Cargo Problem 3 using uniform_cost_search...

| # Actions | Expansions | Goal Tests | New Nodes |
|---|---|---|---|
| 88 | 18510 | 18512 | 161936 |

Plan length: 12  Time elapsed in seconds: 7.452889699
Load(C2, P2, JFK)
Fly(P2, JFK, ATL)
Load(C3, P2, ATL)
Fly(P2, ATL, ORD)
Load(C4, P2, ORD)
Fly(P2, ORD, SFO)
Load(C1, P2, SFO)
Unload(C4, P2, SFO)
Unload(C2, P2, SFO)
Fly(P2, SFO, JFK)
Unload(C3, P2, JFK)
Unload(C1, P2, JFK)


Solving Air Cargo Problem 3 using greedy_best_first_graph_search with h_unmet_goals...

| # Actions | Expansions | Goal Tests | New Nodes |
|---|---|---|---|
| 88 | 25 | 27 | 230 |

Plan length: 15  Time elapsed in seconds: 0.018223191000000583
Load(C1, P1, SFO)
Load(C2, P2, JFK)
Fly(P2, JFK, SFO)
Unload(C2, P2, SFO)
Fly(P2, SFO, ORD)
Load(C4, P2, ORD)
Fly(P2, ORD, SFO)
Unload(C4, P2, SFO)
Fly(P2, SFO, ATL)
Load(C3, P2, ATL)
Fly(P2, ATL, JFK)
Unload(C3, P2, JFK)
Fly(P2, JFK, SFO)
Fly(P1, SFO, JFK)
Unload(C1, P1, JFK)


Solving Air Cargo Problem 3 using greedy_best_first_graph_search with h_pg_levelsum...

| # Actions | Expansions | Goal Tests | New Nodes |
|---|---|---|---|
| 88 | 14 | 16 | 126 |

Plan length: 14  Time elapsed in seconds: 13.544867927
Load(C1, P1, SFO)

Fly(P1, SFO, ORD)
Load(C2, P2, JFK)
Fly(P2, JFK, SFO)
Unload(C2, P2, SFO)
Fly(P2, SFO, ATL)
Load(C3, P2, ATL)
Fly(P2, ATL, JFK)
Unload(C3, P2, JFK)
Load(C4, P1, ORD)
Fly(P1, ORD, SFO)
Unload(C4, P1, SFO)
Fly(P1, SFO, JFK)
Unload(C1, P1, JFK)


Solving Air Cargo Problem 3 using astar_search with h_unmet_goals...
# Actions   Expansions   Goal Tests   New Nodes
   88        7388         7390         65711
Plan length: 12  Time elapsed in seconds: 4.302451536999996
Load(C2, P2, JFK)
Fly(P2, JFK, ATL)
Load(C3, P2, ATL)
Fly(P2, ATL, ORD)
Load(C4, P2, ORD)
Fly(P2, ORD, SFO)
Unload(C4, P2, SFO)
Unload(C2, P2, SFO)
Load(C1, P2, SFO)
Fly(P2, SFO, JFK)
Unload(C3, P2, JFK)
Unload(C1, P2, JFK)


Solving Air Cargo Problem 3 using astar_search with h_pg_levelsum...
# Actions   Expansions   Goal Tests   New Nodes
   88        369          371          3403
Plan length: 12  Time elapsed in seconds: 250.908590791
Load(C1, P1, SFO)
Fly(P1, SFO, ATL)
Load(C3, P1, ATL)
Fly(P1, ATL, JFK)
Load(C2, P2, JFK)
Fly(P2, JFK, ORD)
Load(C4, P2, ORD)
Fly(P2, ORD, SFO)
Unload(C4, P2, SFO)
Unload(C3, P1, JFK)
Unload(C2, P2, SFO)
Unload(C1, P1, JFK)