Parsing...  
Parsing: [0.000s CPU, 0.006s wall-clock]  
Normalizing task... [0.000s CPU, 0.000s wall-clock]  
Instantiating...  
Generating Datalog program... [0.000s CPU, 0.000s wall-clock]  
Normalizing Datalog program...  
Normalizing Datalog program: [0.000s CPU, 0.001s wall-clock]  
Preparing model... [0.000s CPU, 0.004s wall-clock]  
Generated 13 rules.  
Computing model... [0.000s CPU, 0.001s wall-clock]  
21 relevant atoms  
7 auxiliary atoms  
28 final queue length  
31 total queue pushes  
Completing instantiation... [0.000s CPU, 0.000s wall-clock]  
Instantiating: [0.000s CPU, 0.008s wall-clock]  
Computing fact groups...  
Finding invariants...  
6 initial candidates  
Finding invariants: [0.010s CPU, 0.001s wall-clock]  
Checking invariant weight... [0.000s CPU, 0.000s wall-clock]  
Instantiating groups... [0.000s CPU, 0.000s wall-clock]  
Collecting mutex groups... [0.000s CPU, 0.000s wall-clock]  
Choosing groups...  
2 uncovered facts  
Choosing groups: [0.000s CPU, 0.000s wall-clock]  
Building translation key... [0.000s CPU, 0.000s wall-clock]  
Computing fact groups: [0.010s CPU, 0.002s wall-clock]  
Building STRIPS to SAS dictionary... [0.000s CPU, 0.000s wall-clock]  
Building dictionary for full mutex groups... [0.000s CPU, 0.000s wall-clock]  
Building mutex information...  
Building mutex information: [0.000s CPU, 0.000s wall-clock]  
Translating task...  
Processing axioms...  
Simplifying axioms... [0.000s CPU, 0.000s wall-clock]  
Processing axioms: [0.000s CPU, 0.000s wall-clock]  
Translating task: [0.000s CPU, 0.001s wall-clock]  
1 effect conditions simplified  
0 implied preconditions added  
Detecting unreachable propositions...  
0 operators removed  
0 axioms removed  
1 propositions removed  
Detecting unreachable propositions: [0.000s CPU, 0.000s wall-clock]  
Reordering and filtering variables...  
3 of 3 variables necessary.  
0 of 1 mutex groups necessary.  
4 of 4 operators necessary.  
0 of 0 axiom rules necessary.  
Reordering and filtering variables: [0.000s CPU, 0.000s wall-clock]  
Translator variables: 3  
Translator derived variables: 0  
Translator facts: 6  
Translator goal facts: 1  
Translator mutex groups: 0  
Translator total mutex groups size: 0  
Translator operators: 4  
Translator axioms: 0  
Translator task size: 25  
Translator peak memory: 27360 KB  
Writing output... [0.000s CPU, 0.000s wall-clock]  
Done! [0.010s CPU, 0.027s wall-clock]  
INFO     Running search (release32).  
INFO     search input: output.sas  
INFO     search arguments: ['--if-unit-cost', '--heuristic',  
'hlm=lama\_synergy(lm\_rhw(reasonable\_orders=true))', '--heuristic',  
'hff=ff\_synergy(hlm)', '--search',  
'iterated([lazy\_greedy([hff,hlm],preferred=[hff,hlm]),lazy\_wastar([hff,hlm],preferred=[hff,hlm],w=5),lazy\_wastar([hff,hlm],preferred=[hff,hlm],w=3),lazy\_wastar([hff,hlm],preferred=[hff,hlm],w=2),lazy\_wastar([hff,hlm],preferred=[hff,hlm],w=1)],repeat\_last=true,continue\_on\_fail=true)',  
'--if-non-unit-cost', '--heuristic',  
'hlm1=lama\_synergy(lm\_rhw(reasonable\_orders=true,lm\_cost\_type=one),transform=adapt\_costs(one))',  
'--heuristic', 'hff1=ff\_synergy(hlm1)', '--heuristic',  
'hlm2=lama\_synergy(lm\_rhw(reasonable\_orders=true,lm\_cost\_type=plusone),transform=adapt\_costs(plusone))',  
'--heuristic', 'hff2=ff\_synergy(hlm2)', '--search',  
'iterated([lazy\_greedy([hff1,hlm1],preferred=[hff1,hlm1],cost\_type=one,reopen\_closed=false),lazy\_greedy([hff2,hlm2],preferred=[hff2,hlm2],reopen\_closed=false),lazy\_wastar([hff2,hlm2],preferred=[hff2,hlm2],w=5),lazy\_wastar([hff2,hlm2],preferred=[hff2,hlm2],w=3),lazy\_wastar([hff2,hlm2],preferred=[hff2,hlm2],w=2),lazy\_wastar([hff2,hlm2],preferred=[hff2,hlm2],w=1)],repeat\_last=true,continue\_on\_fail=true)',  
'--always']  
INFO     search time limit: None  
INFO     search memory limit: None  
INFO     search executable: /home/akshay/downward/builds/release32/bin/downward  
INFO     callstring:  
/home/akshay/downward/builds/release32/bin/downward --if-unit-cost  
--heuristic 'hlm=lama\_synergy(lm\_rhw(reasonable\_orders=true))'  
--heuristic 'hff=ff\_synergy(hlm)' --search  
'iterated([lazy\_greedy([hff,hlm],preferred=[hff,hlm]),lazy\_wastar([hff,hlm],preferred=[hff,hlm],w=5),lazy\_wastar([hff,hlm],preferred=[hff,hlm],w=3),lazy\_wastar([hff,hlm],preferred=[hff,hlm],w=2),lazy\_wastar([hff,hlm],preferred=[hff,hlm],w=1)],repeat\_last=true,continue\_on\_fail=true)'  
--if-non-unit-cost --heuristic  
'hlm1=lama\_synergy(lm\_rhw(reasonable\_orders=true,lm\_cost\_type=one),transform=adapt\_costs(one))'  
--heuristic 'hff1=ff\_synergy(hlm1)' --heuristic  
'hlm2=lama\_synergy(lm\_rhw(reasonable\_orders=true,lm\_cost\_type=plusone),transform=adapt\_costs(plusone))'  
--heuristic 'hff2=ff\_synergy(hlm2)' --search  
'iterated([lazy\_greedy([hff1,hlm1],preferred=[hff1,hlm1],cost\_type=one,reopen\_closed=false),lazy\_greedy([hff2,hlm2],preferred=[hff2,hlm2],reopen\_closed=false),lazy\_wastar([hff2,hlm2],preferred=[hff2,hlm2],w=5),lazy\_wastar([hff2,hlm2],preferred=[hff2,hlm2],w=3),lazy\_wastar([hff2,hlm2],preferred=[hff2,hlm2],w=2),lazy\_wastar([hff2,hlm2],preferred=[hff2,hlm2],w=1)],repeat\_last=true,continue\_on\_fail=true)'  
--always --internal-plan-file sas\_plan < output.sas  
reading input... [t=3.9686e-05s]  
done reading input! [t=0.000138612s]  
packing state variables...done! [t=0.000146268s]  
Variables: 3  
FactPairs: 6  
Bytes per state: 4  
Building successor generator...done! [t=0.000198195s]  
peak memory difference for root successor generator creation: 0 KB  
time for root successor generation creation: 5.182e-06s  
done initializing global data [t=0.000227779s]  
Initializing Exploration...  
Initializing landmarks count heuristic...  
Generating landmarks using the RPG/SAS+ approach  
approx. reasonable orders  
approx. obedient reasonable orders  
Removed 0 reasonable or obedient reasonable orders  
Landmarks generation time: 0.000133083s  
Discovered 3 landmarks, of which 0 are disjunctive and 0 are conjunctive  
2 edges  
Initializing LAMA-FF synergy master  
Initializing LAMA-FF synergy slave  
Starting search: lazy\_greedy(list(hff, hlm), preferred = list(hff, hlm))  
Conducting lazy best first search, (real) bound = 2147483647  
2 initial landmarks, 1 goal landmarks  
New best heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
New best heuristic value for ff\_synergy(hlm): 3  
[g=0, 1 evaluated, 0 expanded, t=0.00151037s, 4476 KB]  
Initial heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
Initial heuristic value for ff\_synergy(hlm): 3  
New best heuristic value for ff\_synergy(hlm): 2  
[g=2, 3 evaluated, 2 expanded, t=0.00159482s, 4476 KB]  
New best heuristic value for ff\_synergy(hlm): 1  
[g=3, 4 evaluated, 3 expanded, t=0.00163987s, 4476 KB]  
Solution found!  
Actual search time: 0.000190213s [t=0.00167914s]  
up f0 f1 (1)  
stop f1 (1)  
down f1 f0 (1)  
stop f0 (1)  
Plan length: 4 step(s).  
Plan cost: 4  
Expanded 4 state(s).  
Reopened 0 state(s).  
Evaluated 5 state(s).  
Evaluations: 10  
Generated 8 state(s).  
Dead ends: 0 state(s).  
Number of registered states: 5  
Int hash set load factor: 5/8 = 0.625  
Int hash set resizes: 3  
Best solution cost so far: 4  
Solution found - keep searching  
Starting search: lazy\_wastar(list(hff, hlm), preferred = list(hff, hlm), w = 5)  
Conducting lazy best first search, (real) bound = 4  
2 initial landmarks, 1 goal landmarks  
New best heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
New best heuristic value for ff\_synergy(hlm): 3  
[g=0, 1 evaluated, 0 expanded, t=0.00189262s, 4476 KB]  
Initial heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
Initial heuristic value for ff\_synergy(hlm): 3  
New best heuristic value for ff\_synergy(hlm): 2  
[g=2, 3 evaluated, 2 expanded, t=0.00197045s, 4476 KB]  
New best heuristic value for ff\_synergy(hlm): 1  
[g=3, 4 evaluated, 3 expanded, t=0.00201622s, 4476 KB]  
Completely explored state space -- no solution!  
Actual search time: 0.000174744s [t=0.00205171s]  
Expanded 4 state(s).  
Reopened 0 state(s).  
Evaluated 4 state(s).  
Evaluations: 8  
Generated 8 state(s).  
Dead ends: 0 state(s).  
Number of registered states: 4  
Int hash set load factor: 4/4 = 1  
Int hash set resizes: 2  
Best solution cost so far: 4  
No solution found - keep searching  
Starting search: lazy\_wastar(list(hff, hlm), preferred = list(hff, hlm), w = 3)  
Conducting lazy best first search, (real) bound = 4  
2 initial landmarks, 1 goal landmarks  
New best heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
New best heuristic value for ff\_synergy(hlm): 3  
[g=0, 1 evaluated, 0 expanded, t=0.00218589s, 4476 KB]  
Initial heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
Initial heuristic value for ff\_synergy(hlm): 3  
New best heuristic value for ff\_synergy(hlm): 2  
[g=2, 3 evaluated, 2 expanded, t=0.00225611s, 4476 KB]  
New best heuristic value for ff\_synergy(hlm): 1  
[g=3, 4 evaluated, 3 expanded, t=0.00230069s, 4476 KB]  
Completely explored state space -- no solution!  
Actual search time: 0.000165889s [t=0.002336s]  
Expanded 4 state(s).  
Reopened 0 state(s).  
Evaluated 4 state(s).  
Evaluations: 8  
Generated 8 state(s).  
Dead ends: 0 state(s).  
Number of registered states: 4  
Int hash set load factor: 4/4 = 1  
Int hash set resizes: 2  
Best solution cost so far: 4  
No solution found - keep searching  
Starting search: lazy\_wastar(list(hff, hlm), preferred = list(hff, hlm), w = 2)  
Conducting lazy best first search, (real) bound = 4  
2 initial landmarks, 1 goal landmarks  
New best heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
New best heuristic value for ff\_synergy(hlm): 3  
[g=0, 1 evaluated, 0 expanded, t=0.00253137s, 4476 KB]  
Initial heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
Initial heuristic value for ff\_synergy(hlm): 3  
New best heuristic value for ff\_synergy(hlm): 2  
[g=2, 3 evaluated, 2 expanded, t=0.00260355s, 4476 KB]  
New best heuristic value for ff\_synergy(hlm): 1  
[g=3, 4 evaluated, 3 expanded, t=0.00264605s, 4476 KB]  
Completely explored state space -- no solution!  
Actual search time: 0.00016435s [t=0.00268096s]  
Expanded 4 state(s).  
Reopened 0 state(s).  
Evaluated 4 state(s).  
Evaluations: 8  
Generated 8 state(s).  
Dead ends: 0 state(s).  
Number of registered states: 4  
Int hash set load factor: 4/4 = 1  
Int hash set resizes: 2  
Best solution cost so far: 4  
No solution found - keep searching  
Starting search: lazy\_wastar(list(hff, hlm), preferred = list(hff, hlm), w = 1)  
Conducting lazy best first search, (real) bound = 4  
2 initial landmarks, 1 goal landmarks  
New best heuristic value for ff\_synergy(hlm): 3  
New best heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
[g=0, 1 evaluated, 0 expanded, t=0.0028185s, 4476 KB]  
Initial heuristic value for ff\_synergy(hlm): 3  
Initial heuristic value for lama\_synergy(lm\_rhw(reasonable\_orders = true)): 1  
New best heuristic value for ff\_synergy(hlm): 2  
[g=2, 3 evaluated, 2 expanded, t=0.00287998s, 4476 KB]  
New best heuristic value for ff\_synergy(hlm): 1  
[g=3, 4 evaluated, 3 expanded, t=0.0029202s, 4476 KB]  
Completely explored state space -- no solution!  
Actual search time: 0.00018723s [t=0.00299558s]  
Expanded 4 state(s).  
Reopened 0 state(s).  
Evaluated 4 state(s).  
Evaluations: 8  
Generated 8 state(s).  
Dead ends: 0 state(s).  
Number of registered states: 4  
Int hash set load factor: 4/4 = 1  
Int hash set resizes: 2  
Best solution cost so far: 4  
No solution found - keep searching  
Actual search time: 0.0017363s [t=0.00306208s]  
Cumulative statistics:  
Expanded 20 state(s).  
Reopened 0 state(s).  
Evaluated 21 state(s).  
Evaluations: 42  
Generated 40 state(s).  
Dead ends: 0 state(s).  
Search time: 0.00174532s  
Total time: 0.00306805s  
Solution found.  
Peak memory: 4476 KB