The 3-Jug Problem (jug)

—- Run LPL Code , HTML Document –

Problem: There are three jugs with capacities of 8, 5, and 3 liters. Initially the 8-liter jug is full of water, whereas the others are empty. Find a sequence for pouring the water from one jug to another such that the end result is to have 4 liters in the 8-liter jug and the other 4 liters in the 5-liter jug. When pouring the water from a jug A into another jug B, either jug A must be emptied or B must be filled, see Figure 1.

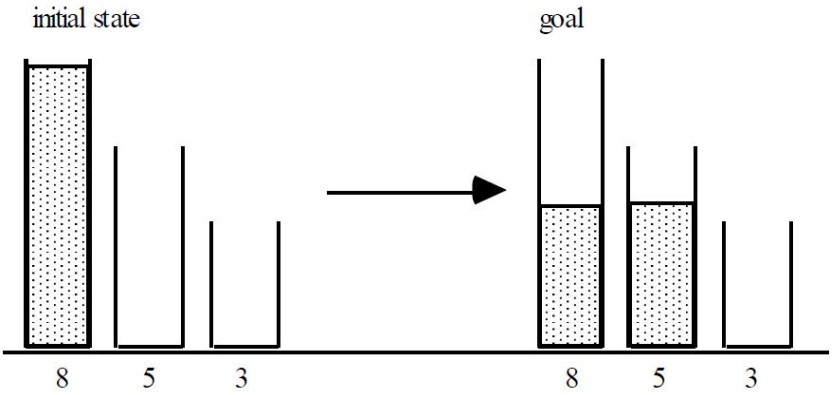

Figure 1: 3-Jug Problem

Questions

1. Vary the problem: Try, for example:

```
T:=9; InitState:='(8,1,0)'; GoalState:='(2,5,2)';
```

   Or try this:

```
T:=10; InitState:='(10,0,0)'; GoalState:='(3,4,3)';
C{k}:=[10 5 3];
```

2. Try also this : (what happens?)

```
T:=12; InitState:='(10,2,0)'; GoalState:='(5,6,1)';
C{k}:=[12 6 3];
```

3. Another shorter formulation of the jug problem is: jugA[1].

References

[1] MatMod. Homepage for Learning Mathematical Modeling : https://matmod.ch.

[1] https://lpl.matmod.ch/lpl/Solver.jsp?name=/jugA