

Code:

```
from collections import defaultdict
jug1, jug2, aim = 4, 3, 2
visited = defaultdict(lambda: False)
def waterJugSolver(amt1, amt2):
    if (amt1 == aim and amt2 == 0) or (amt2 == aim and amt1 == 0):
        print(amt1, amt2)
        return True
    if visited[(amt1, amt2)] == False:
        print(amt1, amt2)
        visited[(amt1, amt2)] = True
        return (waterJugSolver(0, amt2) or
                waterJugSolver(amt1, 0) or
                waterJugSolver(jug1, amt2) or
                waterJugSolver(amt1, jug2) or
                waterJugSolver(amt1 + min(amt2, (jug1 - amt1)),
                                amt2 - min(amt2, (jug1 - amt1))) or
                waterJugSolver(amt1 - min(amt1, (jug2 - amt2)),
                                amt2 + min(amt1, (jug2 - amt2))))
    else:
        return False
print("Steps: ")
waterJugSolver(0, 0)
```

Output:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
● PS C:\Users\shrey\OneDrive\Desktop\programs> python -u "c:\Users\shrey\OneDrive\Desktop\programs\Python\waterJug.py"
○ Steps:
0 0
5 0
5 4
0 4
4 0
4 4
5 3
0 3
3 0
3 4
5 2
0 2
PS C:\Users\shrey\OneDrive\Desktop\programs>
```