def pour(jug1, jug2):

max1, max2, fill = 5, 7, 4

print("%d\t%d" % (jug1, jug2))

if jug2 is fill:

return

elif jug2 is max2:

pour(0, jug1)

elif jug1 != 0 and jug2 is 0:

pour(0, jug1)

elif jug1 is fill:

pour(jug1, 0)

elif jug1 < max1:

pour(max1, jug2)

elif jug1 < (max2-jug2):

pour(0, (jug1+jug2))

else:

pour(jug1-(max2-jug2), (max2-jug2)+jug2)

print("JUG1\tJUG2")

pour(0, 0)