print ("WATER JUG PROBLEM")

x = int(input("enter X:"))

y = int(input("enter y:"))

while True:

rno = int(input("Enter the rule number"))

if rno==1:

if x<4:

x=4

if rno==2:

if y<3:

y<3

if rno==5:

if x<0:

x=0

if rno==6:

if y<0:

y=0

if rno==7:

if x+y>=4 and y>0:

x,y=4,y-(4-x)

if rno==8:

if x+y>=3 and x>0:

x,y=x-(3-y),3

if rno==9:

if x+y<=4 and y>0:

x,y=x+y,0

if rno==10:

if x+y<=3 and x>0:

x,y=0,x+y

print("x=",x)

print("y=",y)

if(x==2):

print("the result is in goal state")

break