```lua
math.randomseed(tostring(os.time()):reverse():sub(1, 7))

fp=assert(io.open("bnet_samples.txt","w"))

function I(c)
        n=math.random()
        if (c<=n) then
            return 0;
        else
            return 1;
        end
end

num=1000
aa={}
d1={{0.2,0.8},{0.7,0.9}}
d2={0.1,0.7}
d3=0
d4=0

for i=1,num do
        aa[i]={}
        for j=1,4 do
            aa[i][j]=0
        end
end

for i=1,num do
    aa[i][1]=I(0.7)
    aa[i][2]=I(0.9)
    aa[i][3]=I(d1[aa[i][1]+1][aa[i][2]+1])
    aa[i][4]=I(d2[aa[i][3]+1])
    d3=d3+aa[i][3]
    d4=d4+aa[i][4]
    fp:write(table.concat(aa[i],"\t"),"\n")
end

print(d3/num,d4/num)

```