#include<stdio.h>  
#include<stdlib.h>  
#define MIN(x,y) (x>y)?y:x  
  
int main()  
{  
int orate,drop=0,cap,x,count=0,  
inp[10]={0},i=0,nsec,ch;  
printf(" \n enter bucket size : ");  
scanf("%d",&cap);  
printf("\n enter output rate :");  
scanf("%d",&orate);  
do{  
printf("\n enter number of packets coming at second %d : ",i+1);  
scanf("%d",&inp[i]);  
i++;  
printf("\n enter 1 to contiue or 0 to quit..........");  
scanf("%d",&ch);  
}while(ch);  
nsec=i;  
printf("\n second \t recieved \t sent \t dropped \t remained \n");  
for(i=0;count || i<nsec;i++)  
{  
printf("%d",i+1);  
printf(" \t %d\t ",inp[i]);  
printf(" \t %d\t ",MIN((inp[i]+count),orate));  
if((x=inp[i]+count-orate)>0)  
{  
if(x>cap)  
{  
count=cap;  
drop=x-cap;  
}  
else  
{  
count=x;  
drop=0;  
}  
}  
else  
{  
drop=0;  
count=0;  
}  
printf(" \t %d \t %d \n",drop,count);  
}  
return 0;  
}