import java.io.\*;

class fifo

{

public static void main(String args[]) throws IOException

{

int n;

int f;

float rat;

BufferedReader br=new BufferedReader(new InputStreamReader(System.in));

System.out.println("Enter the number of Frames :");

f=Integer.parseInt(br.readLine());

int fifo[]=new int[f];

System.out.println("Enter the number of Pages :");

n=Integer.parseInt(br.readLine());

int inp[]=new int[n];

System.out.println("Enter Pages:");

for(int i=0;i<n;i++)

inp[i]=Integer.parseInt(br.readLine());

System.out.println("----------------------");

for(int i=0;i<f;i++)

fifo[i]=-1;

int Hit=0;

int Fault=0;

int j=0;

boolean check;

for(int i=0;i<n;i++)

{

check=false;

for(int k=0;k<f;k++)

if(fifo[k]==inp[i])

{

check=true;

Hit=Hit+1;

}

if(check==false)

{

fifo[j]=inp[i];

j++;

if(j>=f)

j=0;

Fault=Fault+1;

}

}

rat = (float)Hit/(float)n;

System.out.println("HIT:"+Hit+" FAULT:"+Fault+" HIT RATIO:"+rat);

}

}