Write a C program to check whether a number is prime, armstrong, perfect number or not using functions.

Input:

11

Output:

11 is prime number

11 is not a armstrong number

11 is not a perfect number

ANSWER

#include<stdio.h>

#include<math.h>

void prime(int n){

int m=0;

for (int x=1;x<=n;x++){

if(n%x==0){

m++;

}

}

if(m==2){printf("%d is prime",n);}

else{printf("\n%d is composite",n);}

}

void armstrong(int n){

int a=n,power=0;

while (a>=1){

int b=a%10;

a=a-b;

a=a/10;

power+=1;

}

int sum1=0,f=n,d=0;

while (f>=1){

int b=f%10;

f=f-b;

f=f/10;

int po=pow(b,power);

sum1=sum1+po;

}

if (sum1==n){printf("\n%d is an armstrong number",n);}

else{printf("\n%d is not an armstrong number",n);}

}

void perfect(int n){

int g=0;

for(int x=1;x<n;x++){

if (n%x==0){g+=x;}

}

if(g==n){printf("\n%d is a perfect number",n);}

else{printf("\n%d is not a perfect number",n);}

}

int main(){

int n;

scanf("%d",&n);

prime(n);

armstrong(n);

perfect(n);

}

