#include <stdio.h>

#include <math.h>

int isPrime(int num);

int isArmstrong(int num);

int isPerfect(int num);

int main()

{

int num;

printf("Enter any number: ");

scanf("%d", &num);

if(isPrime(num))

{

printf("%d is Prime number.\n", num);

}

else

{

printf("%d is not Prime number.\n", num);

}

if(isArmstrong(num))

{

printf("%d is Armstrong number.\n", num);

}

else

{

printf("%d is not Armstrong number.\n", num);

}

if(isPerfect(num))

{

printf("%d is Perfect number.\n", num);

}

else

{

printf("%d is not Perfect number.\n", num);

}

return 0;

}

int isPrime(int num)

{

int i;

for(i=2; i<=num/2; i++)

{

if(num%i == 0)

{

return 0;

}

}

return 1;

}

int isArmstrong(int num)

{

int lastDigit, sum, originalNum, digits;

sum = 0;

originalNum = num;

digits = (int) log10(num) + 1;

while(num > 0)

{

lastDigit = num % 10;

sum = sum + round(pow(lastDigit, digits));

num = num / 10;

}

return (originalNum == sum);

}

int isPerfect(int num)

{

int i, sum, n;

sum = 0;

n = num;

for(i=1; i<n; i++)

{

if(n%i == 0)

{

sum += i;

}

}

return (num == sum);

}