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from math import *
def premier(n):
    p=2;t=1
    while p<=int(sqrt(n)) and t==1:
        if n%p !=0:
            p=p+1;
        else:
            t=0;
    if t==0:
        return(False)
    else:
        return(True)

def listpremier(n):
    P=[2];
    for i in range(3,n+1):
        if premier(i):
            P.append(i)
    return(P)

```

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from math import *
def listdiviseur(n):
    L=[1];
    for i in range(2,n+1):
        if n%i==0:
            L.append(i)
    return(L)

def parfait(n):
    if sum(listdiviseur(n))==2*n:
        r=True
    else:
        r=False
    return(r)

```

```

from math import *
def pgcd(a,b):
    A=a;B=b;
    while B!=0:
        r=A%B;
        A=B;
        B=r;
    return(A)

def euler(n):
    s=0;
    for i in range(1,n+1):
        if pgcd(i,n)==1:
            s=s+1
    return(s)

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