

```

from math import *

def prime(atester):
    pastrouve = True
    k = 2
    if (atester == 1): return False
    if (atester == 2): return True
    if (atester == 3): return True
    if (atester == 5): return True
    if (atester == 7): return True
    while (pastrouve):
        if ((k * k) > atester):
            return True
        else:
            if ((atester % k) == 0):
                return False
            else: k=k+1

nmax=10002
dmax=8
for n in range(14,nmax,2):
    pi2x = 0
    for compteprem in range(2,n+1,1):
        if (prime(compteprem)):
            pi2x=pi2x+1
    xa=0 ; xd=0
    for x in range(3,n//2+1,2):
        if (prime(x)):
            if (prime(n-x)):
                xa=xa+1
            else:
                if (not(prime(n-x))):
                    xd=xd+1
    print('')
    print('%6d : Xa      %6d Xd      %6d' % (n,xa,xd))
    print('          : E(n/4) %6d pi(n) %6d E(n/4)-pi(n) %6d delta %6d' %
(n//4,pi2x,n//4-pi2x,xd-xa-n//4+pi2x))
#####
# valeurs des variables
#####
#
# xa = #{p+q=n / p%2 = 1 et q%2 = 1 et 3 <= p <= n/2 et p et q premiers}
# xd = #{p+q=n / p%2 = 1 et q%2 = 1 et 3 <= p <= n/2 et p et q composes}
#
#####
# invariants
#####
#
# xd-xa=floor(n/4)-pi2x+delta
#
#####

```